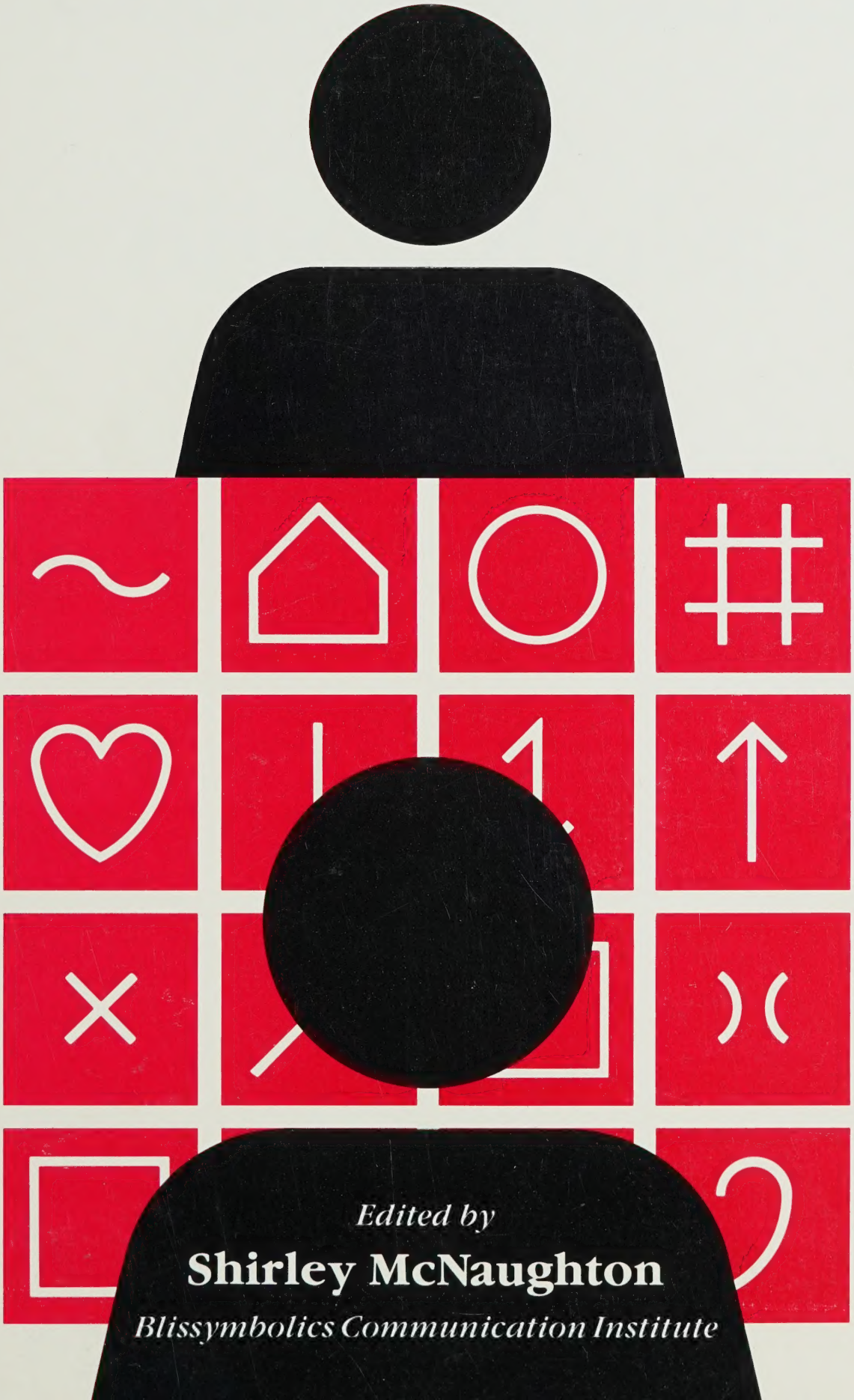
Communicating with Blissymbolics



Edited by

Shirley McNaughton

Blissymbolics Communication Institute

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Shirley McNaughton

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Blissymbolics Communication Institute

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In September, 1982, C. K. Bliss granted an exclusive, non-cancellable and perpetual, world-wide license to the Blissymbolics Communication Institute, for the application of Blissymbols, for use by handicapped persons and persons having communication, language and learning difficulties.

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Foreword

Communicating with Blissymbolics is derived from the *Handbook of Blissymbolics*; however, many new sections have been added. All chapters from the *Handbook* have been rewritten and updated and new authors have made their contribution to the content. Those sections in the *Handbook of Blissymbolics* containing currently relevant instructions relating to programming have been retained; whenever new procedures have been developed, however, they have been included.

Part I, *The System* is the work of Jinny Storr, symbol officer of the Blissymbolics Communication Institute (BCI), 1977 to 1984.

Part II, *Communicating* was written by Shirley McNaughton, Executive Director, BCI, and Penny Parnes, Director, Augmentative Communication Service, Hugh MacMillan Medical Centre (formerly Ontario Crippled Children's Centre.)

Part III, *Programming* contains material by Penny Parnes, chapters 14 and 15, Lynnette Norris, chapter 16, and Shirley McNaughton, who adapted sections of *Handbook of Blissymbolics*, and wrote chapters 13 and 17 to 22.

The organization and content of this publication reflect the common philosophy and objectives of all the authors. It is to be hoped that the individual approaches of the contributors add to the book's interest. Evident throughout the book is the authors' shared focus on functional, meaningful communication using the system of Blissymbolics to ensure as rich an augmentative communication experience as possible.

The authors are deeply appreciative of the support given to them by Sachi Tamura in organizing the initial word processing and editing, Barbara Hehner, assisted by Karen Rankin in the initial editing, Grace Deutsch in the final editing and production and Ann Kennedy in co-ordinating the many aspects of the final editing and production stages. Cathy Fairley's knowledge of the field was evident in the thorough manner in which she compiled the Subject Index. The patience throughout the project of Lesley Carter while typing the many drafts was valued by all.

It is hoped that *Communicating with Blissymbolics* will provide a valuable teaching resource for instructors wanting to offer the best program possible to their students. As co-ordinating editor, I invite each reader to learn as much from the contributors to this book as I have done.

SHIRLEY MCNAUGHTON
Executive Director
Blissymbolics Communication Institute

Preface

Communicating with Blissymbolics has been chosen as the title for this revised edition of the *Handbook of Blissymbolics* because all of the contributing authors wish to stress the value of *communicating* with Blissymbols, as opposed to just learning but not applying the symbols. Too often, graphic system instructional programs fail because the emphasis is on system acquisition rather than system usage. As the title suggests, the objective of *Communicating with Blissymbolics* is to assist instructors as they help nonspeaking individuals communicate using Blissymbolics as their augmentative or alternative communication system.

The term "augmentative and alternative communication systems," now widely used to describe the broadening communication capabilities of nonspeaking people, emphasizes the importance and interdependency of all aspects of an individual's communication system. Over the past decade, Blissymbolics has proven to be easy to learn. As a result, it has functioned effectively within the augmentative and alternative communication systems of thousands of individuals. By *using* Blissymbolics, nonspeaking individuals quickly and dramatically improve their ability to communicate.

The title change of this edition also reflects the growth in our knowledge of this subject. The *Handbook of Blissymbolics*[1] was based on the experiences of an interdisciplinary team at the Ontario Crippled Children's Centre (now the Hugh MacMillan Medical Centre) and the findings of a formative evaluation of the Centre's Symbol Communication Program. *Communicating with Blissymbolics* reflects the authors' six additional years of working and communicating with this system, and the increased recognition of the need to emphasize interaction and communication. Although these objectives were an integral part of the earliest Blissymbol programs, the documentation relating to these processes was insufficient to allow more than enthusiastic reporting of the positive effects of communication using Blissymbols.

Communicating with Blissymbolics is the result of our desire to share our experience and the knowledge we have acquired in the field of augmentative and alternative communication, and our recommendations relating to new materials developed by the Blissymbolics Communication Institute (BCI).

Instructors, Blissymbol users, parents and administrators should find this edition a practical reference to the application of Blissymbolics as an augmentative or alternative communication system. As with its predecessor, several fundamental assumptions underlie *Communicating with Blissymbolics:*

1. Communication is the right of all human beings. Given the uniqueness of every individual, this right should encompass the freedom to choose the particular system(s) of communication most acceptable to the user.
2. An individual's communication system must be suited to his or her learning capacity and needs at *all* stages of development. Before nonspeaking individuals

acquire the maturity to decide independently their preferred means of communication, it is the responsibility of parents and instructors to provide a communication mode compatible with and transferable to a traditional communication system. The right of the individual ultimately to accept or reject either of both systems should be recognized.

3. The system's long-term communication capability, comprehensiveness, and compatibility with traditional orthography must be considered. Also of vital importance are the speed and ease with which the system may be learned; its personal value to the user; long-term support services available to the user; and the respect accorded the system by the community.
4. A visual communication system composed of graphic symbols offers individuals who are unable to speak and who lack fluency in traditional orthography a practical medium for direct conversation, and a means of accessing technology. Seen in this light, Blissymbolics augments communication systems and abilities that are already being used, or serves as an alternative primary system, supported by other communication abilities.
5. All graphic symbol systems are not equivalent with regard to how individual symbols are structured; the way in which symbols are sequenced to convey meaning; the strategies available for acquiring communication competency; or the comprehensiveness of the system's communication potential. Different cognitive skills are required of students in learning dissimilar systems. No two individuals are ever totally alike. In order to match each individual student with the most appropriate system, the instructor must consider both the requirements of the system and the unique learning capabilities and objectives of the students.
6. The instructor's objective should be to provide a communication medium that draws upon each student's strengths, and provides the greatest communicating capability possible given the student's abilities. Acquisition of the system should be viewed as an aid to communication, never as an end in itself. It's the message not the medium that's important. This means the instructor must rely on careful judgement to choose a system requiring the least amount of effort for the greatest communication capability.

While much development and research is still required in the general area of augmentative and alternative communication, and particularly in the application of Blissymbolics, there is also a pressing need in both the clinical and educational areas for published information that will facilitate the introduction and support of augmentative communication programs. *Communicating with Blissymbolics* has been written in response to this need. The writers' experiences, drawn from over a decade of involvement with Blissymbol programs, along with the challenging problems that can arise, give them confidence to offer suggestions and recommendations that make up much of this book. The writers are ever mindful of the limitations of current knowledge. This said, it is their firm belief that each instructor is responsible for drawing on clinical experience, knowledge of instructional principles, and a sensitive awareness of each symbol user's needs in order to apply Blissymbolics successfully in individual situations. Through personal knowledge of the nonspeaking individual, the communication system of Blissymbolics, the environment in which the individual functions, and the people

with whom the Blissymbol user interacts, instructors must assume a strong initiative in developing effective individualized communication programs. We hope instructors will find *Communicating with Blissymbolics* a valuable current resource tool.

One of Blissymbolics' great strengths is its inherent potential for growth. The Blissymbol community can look forward to benefiting from ongoing clinical experience, as well as the work of the BCI International Panel on Standards for Blissymbolics and research in the field of augmentative communication. Through BCI's co-ordination of the development of Blissymbolics, constructive system modifications will be made and new vocabulary added to the standard vocabulary appearing in *Blissymbolics for Use* (Hehner, 1980), thereby enabling Blissymbolics to evolve and serve as an effective augmentative or alternative communication system.

Just as applying Blissymbolics is the would-be user's first objective, so providing support services for the application of Blissymbolics is the primary goal of the Blissymbolics Communication Institute. To this end, the Institute's publications, training and community awareness programs, and research and technical development activities support augmentative and alternative communication around the world using the BCI standard system of Blissymbolics.

The procedures described in this publication are intended as suggestions to be adapted to meet the needs of individual students. Strict adherence to the material presented is requested in only one area: all instructors and users are asked to follow the instructions for symbol construction and drawing presented in this guide. Compliance with this request is essential if standard system forms are to be maintained.

In *Communicating with Blissymbolics*, BCI hopes to combine the extensive experience of a number of instructors with current knowledge of augmentative and alternative communication methodology. Suggestions regarding the application and ongoing development of Blissymbolics for those with communication, language and learning difficulties are always welcome. Information on teaching strategies relating to interaction and Blissymbol acquisition that have proven effective with individual learners, and symbol combinations that have been created by users and instructors to meet personal communication needs are invaluable. Ideas presented to the Institute are assured of careful consideration, and when beneficial to a wide readership, will be shared through the BCI magazine *Communicating Together*.

We wish instructors, students and all users of this book many satisfying hours "communicating with Blissymbolics."

S.McN.

NOTES

1. H. Silverman, B. Kates, and S. McNaughton, *The Handbook of Blissymbolics,* (Toronto, Ont.: Blissymbolics Communication Institute, 1978). The study included 62 instructors and 157 subjects from more than 20 locations. The authors wish to express their gratitude to all those who participated in the study. The organizations included in the study are acknowledged on pages 252-53.

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Using *Communicating with Blissymbolics*

The presentation of the subject matter in *Communicating with Blissymbolics* is intended to reinforce effective usage of Blissymbols within the augmentative and alternative communication systems of nonspeaking people. The book is divided into three parts. **Part I: The System,** presents Blissymbolics from several perspectives so that users may appreciate the system's structure and capabilities. (*Blissymbols for Use*, Hehner, 1980, and the *Supplement to Blissymbols for Use* (1984) are recommended for detailed information relating to all symbols in the BCI Standard Vocabulary.) **Part II: Communicating**, emphasizes the importance of interactive functional communication. **Part III: Programming**, offers support to the instructor, and includes information ranging from the initial stages of symbol instruction to the application of Blissymbols to technology and the teaching of reading. The instructional program for Blissymbolics is introduced only after the reader has gained familiarity with the system and with the goal of functional communication.

The approach and style within the various parts of this book differ. Some chapters provide factual information; some respond directly to practical teaching considerations; others offer ideas that instructors will want to return to and restudy as they begin to identify each individual student's abilities, learning style and communication needs.

Finally, no serious study of Blissymbolics is possible without the following essential references:

- Bliss, Charles K. *Semantography-(Blissymbolics)*. Sydney, Australia: Semantography Publications, 1965.
- Bliss, Charles K. and McNaughton, S. *The Book to the Film* Mr. Symbol Man. Sydney, Australia: Semantography Publications, 1975.
- Hehner, Barbara, ed. *Blissymbols for Use*. Toronto, Ont.: Blissymbolics Communication Institute, 1980.
- McDonald, Eugene T. *Teaching and Using Blissymbolics*. Toronto, Ont.: Blissymbolics Communication Institute, 1980.

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The Blissymbolics Communication Institute is deeply appreciative of the financial support of this project by the Kiwanis Club of Toronto. Without the Club's assistance, this project would not have been possible.

Part I
The System



Chapter 1 Introduction to Blissymbolics

Although a few communication programs using picture boards and/or word boards had been introduced to nonspeaking individuals during the 1960s, it was only in the 1970s that attention really began to focus upon the central role of effective communication to individual well-being. This development resulted in strenuous efforts in many parts of the world to meet the needs of the communicatively disadvantaged by seeking practical alternative or augmentative systems of communication.

The development and application of Blissymbolics was an integral part of this period of intense activity. As Blissymbolics has been applied to individuals of different age levels, language backgrounds and primary disabilities, those responsible for the system's development have been able to contribute to and learn from the growing body of knowledge relating to augmentative communication.

Blissymbolics was originally created by Charles K. Bliss of Sydney, Australia (Bliss, 1965). It was Mr. Bliss's hope that the use of his symbol system would promote world peace by eliminating misunderstandings between people speaking different languages. He did not anticipate its use by communicatively disadvantaged individuals.

The Blissymbolics Communication Institute (originally named the Blissymbolics Communication Foundation) was established in 1975. The Institute's major purpose is to support the application of Blissymbolics and to develop and maintain a world-wide standard for the Blissymbolics system and vocabulary as it is used by persons with communication, language and learning difficulties.

In September 1982, Charles K. Bliss granted the Blissymbolics Communication Institute (BCI) an exclusive, noncancellable and perpetual world-wide license for the application of Blissymbols for use by handicapped persons; in particular, those with communication, language and learning difficulties. Under the terms of this agreement, BCI is given the authority to license others to support the standard system within different language groups. BCI Affiliates around the world join with the Institute in providing a standard form of Blissymbols to nonspeaking people in their countries or regions.[1]

As published by the Institute, Blissymbolics is a graphic, meaning based, augmentative or alternative communication system capable of providing comprehensive communication. Blissymbolics offers a vocabulary, structure and strategies that stimulate communication and cognitive development. The system can benefit individuals of all age and intellectual levels who have the potential and opportunity for interactive, functional communication. Blissymbolics can be used independently, with a variety of picture systems and technologies, or as a complement to words and spelling.

Blissymbolics has many characteristics that give it special advantages as an augmentative or alternative system of communication. It's a dynamic system, able to represent abstract concepts. The meaning of each symbol is learned in relation to the logic underlying the system as a whole. It allows for the production of varied types of utterances and is capable of continued growth. It is stimulating and rewarding not only for the user, but for those with whom the user communicates and those who provide instruction. In addition to permitting users to make their needs known and talk about objects in their environment, Blissymbolics enables users to express emotions, thoughts and dreams. Users can explore concepts, produce new (combined) symbols and vary utterances to suit communication contexts. This makes for enjoyable language learning and the development of communication competence. Blissymbolics permits great flexibility. There are several styles of expression. Messages can take the form of one-symbol and two-symbol utterances telegraphic or complete sentences, which follow the pattern of native language. The form selected is determined by the particular capabilities of the user and the total context in which the communication takes place.

Blissymbols are derived from a small number of simple shapes. They can be drawn by hand, making them readily available to everyone. Many symbols are pictographic — an asset for users operating at lower cognitive levels or for those in the early stages of learning the system. Each symbol appears with an accompanying word or words to aid communication.

Like all living languages, Blissymbolics is constantly evolving. As a result, the Institute's responsibility is a challenging one: BCI acts as co-ordinator and clearing-house for the application of Blissymbolics for use by handicapped people and individuals with communication, language and learning difficulties. Maintaining a standard system world-wide requires international agreement as to which symbol will represent a particular meaning and which word(s) will appear with a given symbol. In order to ensure continued agreement on these questions, BCI co-ordinates the ongoing development of the system and vocabulary through a formal structure developed by the Institute's Board of Directors, assisted by the advisory International Panel on Standards for Blissymbolics.

Although the BCI Standard Vocabulary has grown from the handful of symbols used experimentally in 1971 to the approximately 1600 symbols available in *Blissymbols for Use* and the *Supplement to Blissymbols for Use,* requests from the field continue to identify areas in which additional vocabulary is needed.

In the application of Blissymbolics, BCI has stressed those aspects of the system that permit and encourage expansion from the published *standard* vocabulary to cover almost any topic of interest to the individual user. Through creative and

imaginative use of the indicators, the strategy symbols, combined symbols, and the concept of extended meaning, a user's personal symbol vocabulary can be enlarged indefinitely.

NOTES

1. BCI Affiliates and Information Centres are located in the following regions:

 - **Canada:** Alberta, British Columbia, Manitoba, Newfoundland and Labrador, Ontario and Quebec
 - **United States:** Alabama, Florida, Massachusetts, Michigan, Minnesota, New York, Ohio, Pennsylvania, South Dakota and Vermont
 - **Outside North America:** Argentina, Australia, Belgium, Bermuda, Brazil, Denmark, Finland, France, Guam, Hungary, Iceland, India, Israel, Italy, the Netherlands, New Zealand, Norway, Portugal, South Africa, Spain, Sweden, Switzerland, the United Kingdom, Venezuela, West Germany, Zimbabwe

Over 8,000 instructors have been trained around the world by BCI and its affiliates.



Chapter 2 Different Ways of Looking at the System

Blissymbolics can be viewed from several perspectives. These different approaches to the system, which will be discussed in detail in this chapter, provide the instructor with a knowledge base from which to plan each student's learning program.

A. Graphic Aspects

1. Shapes

All Blissymbols are formed from a small number of basic shapes, some of which are geometric.

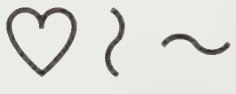
The shapes, or segments of them, appear in the following sizes:

full size 

half size 

quarter size 

Other shapes prominent in the system occur only in full size:



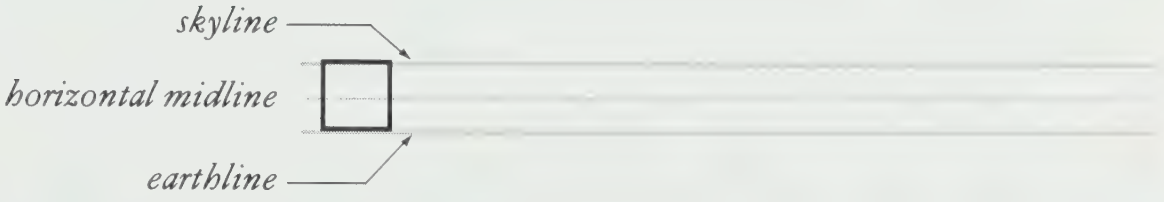
2. Frames of Reference

A *square* is the matrix used for drawing all symbols.

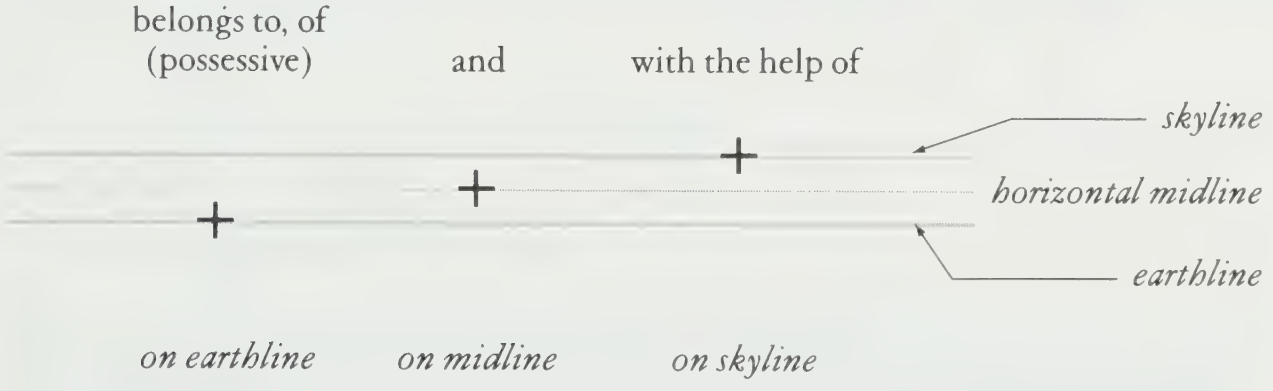


The *size* of the symbol shape is defined as being full size, half size or quarter size, depending on the proportion of the square occupied by the symbol shape.

The top boundary of the square is called the *skyline*, the bottom boundary is the *earthline*. By dividing this square shape in half horizontally we have the *horizontal midline*.



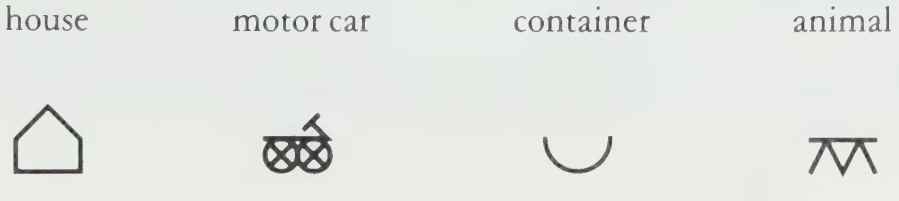
The *location* of a symbol is defined by its relation to the earthline and skyline, for example:



B. Classes of Symbols

1. Pictographs

A *pictographic* symbol looks like the object it represents, for example:



eye	ear	mouth	legs and feet
			

2. Ideographs

The form of an *ideographic* symbol may suggest the concept it represents, but it does not depict the concept directly, for example:

mind	feeling	protection
		
outline of the skull, which contains the brain, the seat of the mind	*outline of the heart, the traditional seat of emotions*	*outline of a roof which provides protection*

water, liquid	electricity	medical
		
wavelike line, suggesting water	*outline of a bolt of lightning*	*outline of the rod of Aesculapius, god of medicine*

3. Dual Classification Symbols

A few symbols may be viewed as either ideographs or pictographs. The instructor may choose which approach is appropriate to the cognitive level of the user.

man	woman	person
		
Ideographic Explanation *outline containing* action *symbol. C.K. Bliss says the male embodies the action principle in human society.*	*outline containing* creation *symbol. C.K. Bliss says the female embodies the creative principle in human society.*	*outline of a human being standing upright, with feet turned out; suggests a person*
Pictographic Explanation *a man wearing trousers*	*a woman wearing a skirt*	*a person, with feet turned out like Charlie Chaplin, or a clown*

4. Arbitrary Symbols

The form of an *arbitrary* symbol has no pictorial or conventional ideographic relationship to its meaning.

(a) Developed by C.K. Bliss[1]

The following symbols are basic to logic of the system.

thing	action	value, evaluation	creation, nature
			
outline of a crystal, the basis of all matter	*an erupting volcano, symbolizing the first action on earth*	*a cone balancing on its point, symbolizing the unstable nature of human evaluations*	*the equalsided triangle, used by the Greeks to represent Creation or the Creator*

So, too, are the time symbols:

past	present	future
)	)(	(
parabolic mirror reflecting what lies behind it, that is, in the past	*the interval between* past *and* future	*parabolic mirror focussed on what lies ahead, that is, in the* future

More arbitrary symbols include:

a, an	the	this	that
⟍	⟋	⟋·	·⟋

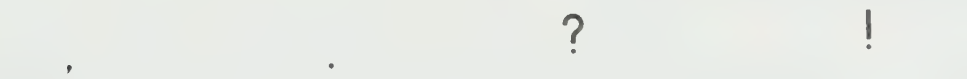
(b) International Symbols

International symbols are those recognized and used throughout the world, for example:

arrows	up	down	forward	backward
	↑	↓	→	←
numbers	one	two	three	hundred
	1	2	3	100
mathematical signs	addition	subtraction	multiplication	division
	+	—	×	÷

(c) Punctuation Marks

Punctuation marks have two uses in Blissymbolics. The first is their traditional orthographic use:



comma *period* *question mark* *exclamation mark*

The second is to convey meaning:

what	command	intensity	period, dot
?	!	!	.
who	please	loud	before, in front of
? ⊥	! ♡	˅ 2 !	· \|
what + person	*command + feeling, i.e., polite command*	*sound + intensity*	*dot + reference line*

C. Composition of Symbols

1. Simple Symbols

The basic Blissymbolics vocabulary consists of approximately 100 *simple* symbols. Simple symbols are used as building blocks to create additional vocabulary.

Simple symbols cannot be broken down into component meaning parts.[2] Here are some simple symbols:

cloth



earth

paper, page



flower



wheel



chair



sun



enclosure



money



flag



tree



knife



2. Compound Symbols

A *compound* symbol[3] is composed of two or more components that have been grouped together to create a meaning. The meaning of each component symbol contributes to the total meaning of the compound symbol. Compound symbols are formed in two ways: they are either *superimposed* or *sequenced*.

(a) Superimposed Symbols

water, liquid



and

sky

becomes

cloud



Here are some more superimposed symbols.

clothing	rain	wheelchair	day
			
cloth + protection	*water + down*	*chair + wheel*	*sun + earth*

father	mother	parent
		
man + protection, i.e., man who gives protection to the family	*woman + protection; i.e., woman who gives protection to the family*	*person + protection, i.e., person who gives protection to the family*

These symbols may also be explained as outline drawings of a **man**, a **woman**, and a **person** respectively, each with arms outstretched to embrace and protect the family members.

More abstract concepts expressed in superimposed symbols include:

colour	food	taste	question
			
eye + earth (halfsize), i.e., what the eye gets from the earth	*mouth + earth (halfsize), i.e., what the mouth gets from the earth*	*mouth + nose; (both play a part in the sensation of taste)*	*what + open (i.e., enclosure open at the top)*

(b) Sequenced Symbols

Sequenced symbols are read from left to right.

map	breath	hat	sitting room, lounge
			
paper / page + earth	*nose + mouth*	*protection + head*	*room + chair*

grandfather	grandmother	grandparent
		
father + parent, i.e., the father of one's father or mother	*mother + parent, i.e., the mother of one's father or mother*	*parent + parent, i.e., the parent of one's father or mother*

(i) Classifiers. The *classifier* is the component symbol that identifies the meaning category in which the compound symbol belongs. The classifier is usually the first component in the sequenced compound symbol, for example:

teacher



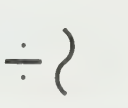
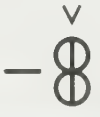
person + (to) give + knowledge
(person is the classifier)

(ii) Modifiers. *Modifiers* usually follow the classifier.

hospital	taxi	dress	elevator
			
house + medical	*motor car + limited time*	*clothing + woman*	*room + up + down*

NOTE: There are some modifiers that *precede* the classifier, for example:

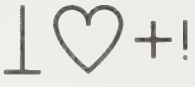
group of, much, many	opposite meaning	part (of)	minus, without
			

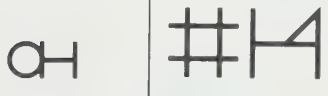
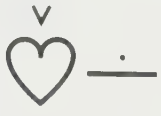
grove	(to) hate	flame	poor
			
group of + tree	*opposite meaning + (to) love*	*part (of) + fire*	*minus / without + money*

D. Meaning Categories

The Blissymbol Standard Vocabulary contains all the meaning categories needed for comprehensive communication.

Symbols represent:

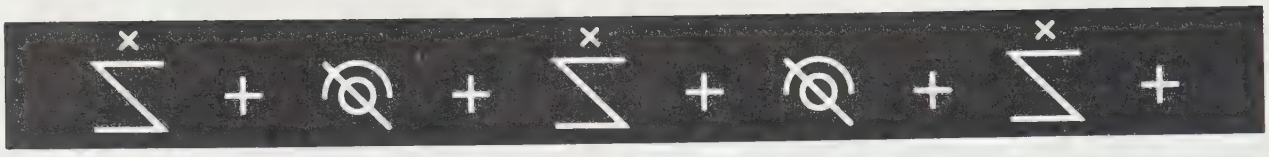
People	Objects	Actions	Feelings	Ideas	Relationships
man	thing	(to) see	happy	idea	before, in front of
					
father	body	(to) need	sad	time	relation
					
friend	tool	(to) work	upset	God	for
					

People	Objects	Actions	Feelings	Ideas	Relationships
baby	sheet	(to) be	proud	mathe-matics	against
					
I, me	telephone	(to) feel	excited	(to) dream	different
					
you	truck	(to) have	afraid	(to) pretend	belongs to, of (possessive)
					

Explanations for all these symbols are provided in *Blissymbols for Use*.

NOTES

1. In *Semantography* (Bliss, 1965), these symbols are classified as arbitrary, although explanations for them are given.
2. In *Semantography* (Bliss, 1965), simple symbols are called "symbol elements."
3. A compound symbol is an established symbol grouping which has come into being either as a creation of Charles Bliss or through inclusion in the BCI Standard Vocabulary.



Chapter 3 Factors that Affect Symbol Meaning

A. Configuration

As the following symbols demonstrate, slight differences in symbol configuration result in different meanings.

mountain



creation, nature



cause



curved line, curve



past



fire



B. Size

Different *sizes* of the same basic shape have different meanings, for example:

action

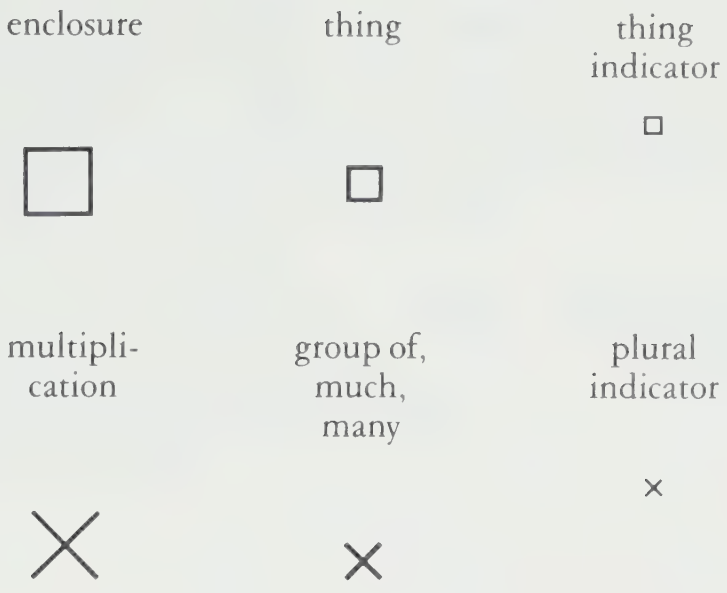


activity



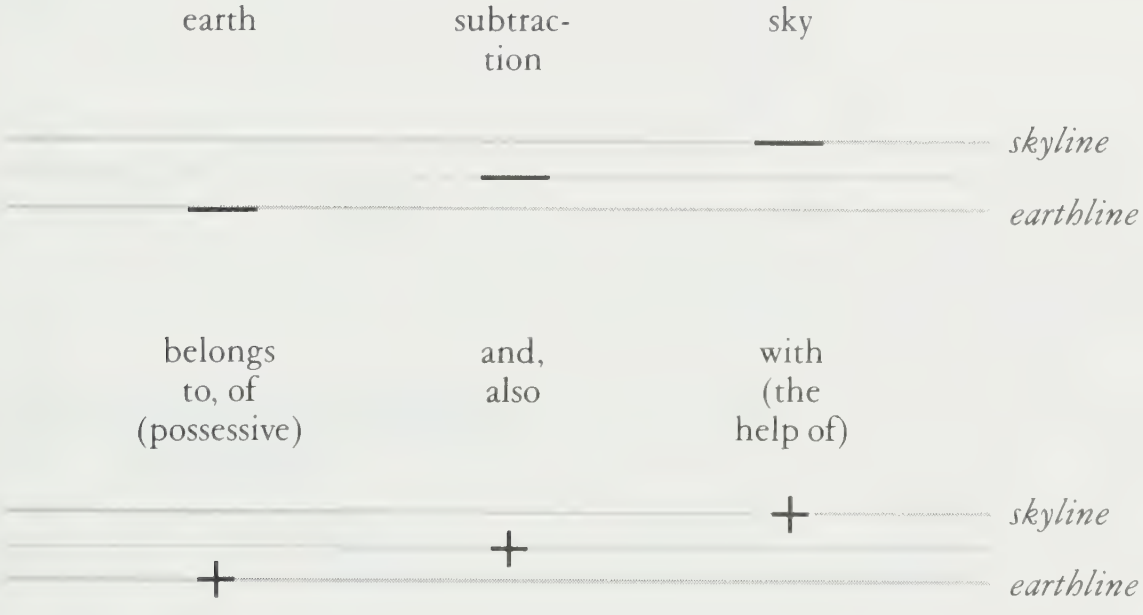
action indicator





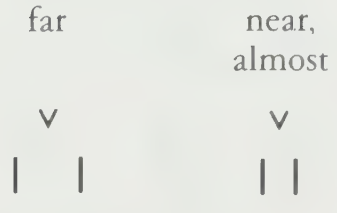
C. Location

The meaning of a symbol is determined by its *location* relative to the *skyline* and the *earthline*.



D. Distance between Graphic Parts

The *distance* between parts of a symbol contributes to the symbol's meaning.



high



low



E. Size of Angle

The meaning of a symbol can be affected by the size of the angle in the symbol shape.

An **acute angle** represents the concept of *action*.

activity



work



A **right angle** represents the concept of *protection.*

protection



son



F. Orientation / Direction

The *orientation* or *direction* of a symbol or symbol part can determine the meaning of a symbol.

door



(to) write



(to) give



room



(to) cross out, destroy



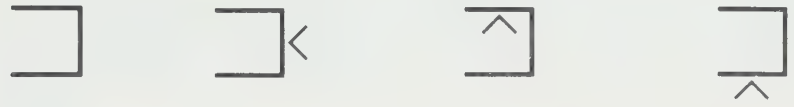
(to) get, receive



G. Pointer

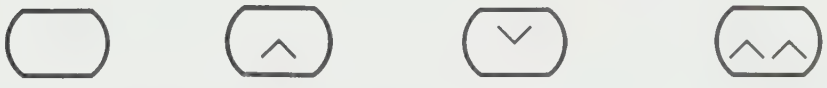
The *pointer* may identify a particular part of the object represented by the symbol.

room wall ceiling floor



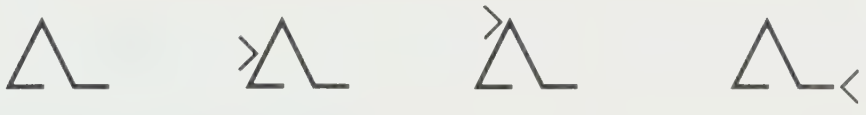
Or the *pointer* may indicate a significant area within a symbol.

body chest stomach breasts



The particular part or significant area becomes the meaning of the symbol. The pointer is placed 1/8 square away from the base symbol so that it can be seen more clearly.[1]

legs and feet leg hip toe



H. Numbers

Numbers are used with other symbols to create new meanings.

1. Personal Pronouns

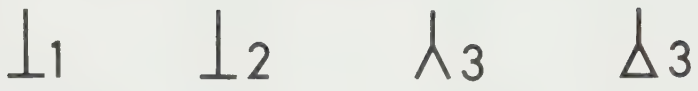
The numbers 1, 2, and 3 are added to the symbols for *man, woman* and *person* in order to create the personal pronouns.

man woman person



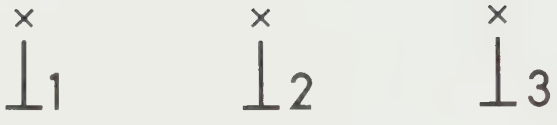
Singular

I, me — you — he, him — she, her



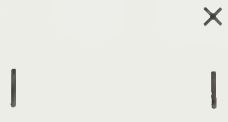
Plural

we, us — you — they, them



NOTE: Additional Pronouns

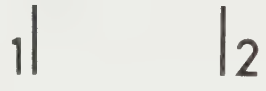
it — they, them



2. *Self* and *Other*

In the following symbols the vertical line is a simplified form of the symbol for *person*.

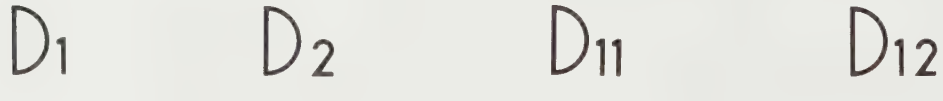
self — other



3. The Calendar

Numbers are used with the symbols for *month* ☽ and *day* ☌ to represent the months or days of the week, for example:

January — February — November — December



Sunday	Monday	Friday	Saturday	weekend
☉1	☉2	☉6	☉7	☉7+1
				Saturday and Sunday

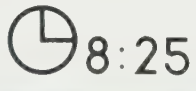
4. Time of Day

morning	afternoon
☉·\|12	☉\|·12
day + before + 12:00 (noon)	*day + after + 12:00 (noon)*

Time may be represented in three ways:

(a) _____

time



(twenty-five minutes past eight o'clock)

(b) _____



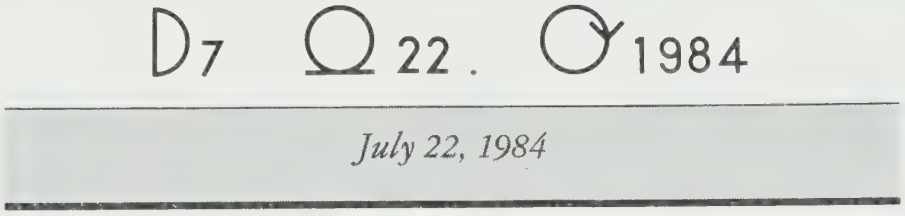
twenty-five minutes after eight o'clock

(c) By using numbers only: 8:25.

5. Dates

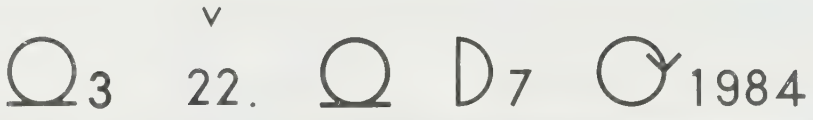
Blissymbols may be used to express the date in one of the following ways:

(a)



July 22, 1984

(b)



Tuesday, July 22, 1984.

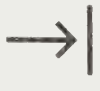
(c) By using numbers only: 22–7–1984 (day, month, year)

I. Positional Reference

The relation of a symbol component to a referent determines the meaning of the total symbol.

The position of the arrow changes the meaning of the symbol. (The arrow represents direction or motion.)

approach



arrival, end



return



through



beginning

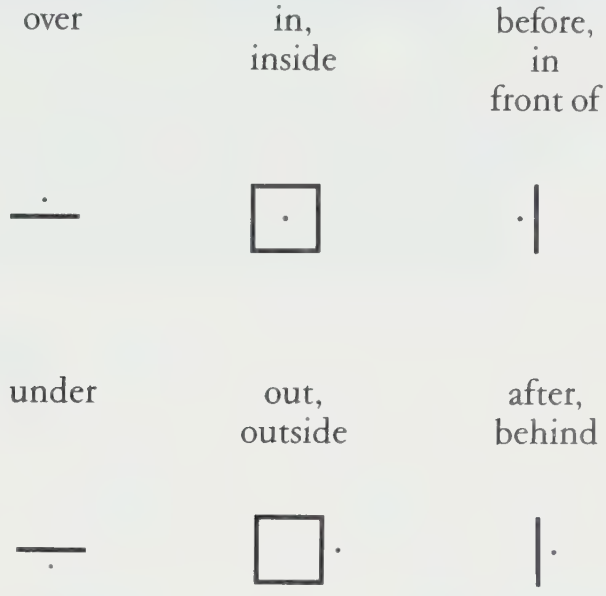


departure

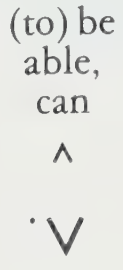


In the above symbols the line is the referent.

Similarly, the location of the dot alters the meaning of the symbol. (The dot represents a point in space or time.)



The lines and squares in the above symbols serve as the referents for the dot.



In the symbol for *(to) be able, can,* the position of the dot before the half-size evaluation symbol indicates judgement before an action. In assuming we can do something, we evaluate our ability to perform an action *prior* to actually doing it.

NOTES

1. In pre-1984 publications, the pointer sometimes touched the base symbols. In 1983 the System Committee ruled that all pointers should be positioned 1/8 square from the base symbol.

Chapter 4 Features of the System

A. Indicators

Indicators identify grammatical categories within the system. These categories are roughly equivalent to the parts of speech in conventional languages.

NOTE: Indicators are
- quarter-size;
- placed above the skyline; and
- usually placed at mid-point above the first symbol element.

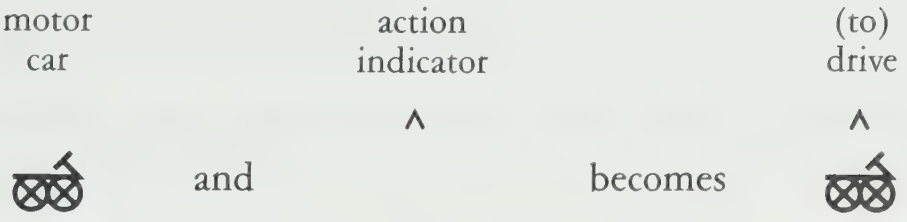
The commonly used indicators are as follows:

action indicator	past action indicator	future action indicator	thing indicator	plural indicator	description (evaluation) indicator
^	)	(	□	×	v

1. The Action Indicator ^

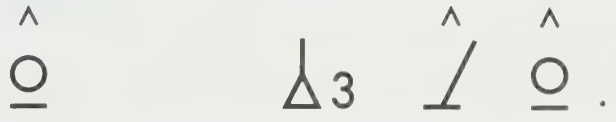
The *action indicator is a miniature version of the action* ⋀ symbol.

Here's how the action indicator works.



The *action indicator* denotes an action symbol or verb, in both the *infinitive* and the *present tense*.

(a) The Infinitive



to eat *She needs to eat.*

(b) Present Tense

The *action indicator* represents *all* forms of the *present tense* in the user's native language, for example:



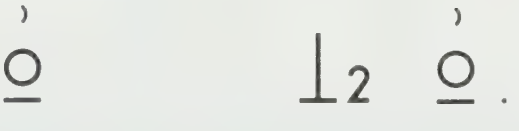
eat, eats;
am, is, are eating

He eats.
He is eating.

2. The Past Action Indicator

The *past action indicator* is a miniature version of the *past*) symbol.

The *past action indicator* represents *all* forms of the *past tense* in the user's native language, for example:



ate;
was, were eating;
did eat;
has, have eaten

You ate.
You were eating.
You did eat.
You have eaten.

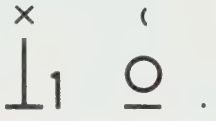
3. The Future Action Indicator

The *future action indicator* is a miniature version of the *future* (symbol.

The *future action indicator* represents *all* forms of the *future tense* in the user's native language, for example:



shall, will eat;
shall, will be eating;
am, is, are going to eat



We will eat.
We will be eating.
We are going to eat.

NOTE: As the preceding examples illustrate, in Blissymbol sentences it's not necessary to use the verbs of (to) have, (to) be, (to) do and (to) go as auxiliary verbs in order to express the several forms of each tense. An auxiliary verb is represented in symbols only when the user wishes a word–for–word translation of his or her native language utterance.

4. The Thing Indicator

The *thing indicator* is a miniature version of the *thing* □ symbol.

In general, in the BCI Standard Vocabulary symbols representing nouns are unmarked. When one symbol can represent both an *abstract* and a *concrete* meaning, the *thing indicator* is used to identify the concrete meaning of the symbol.

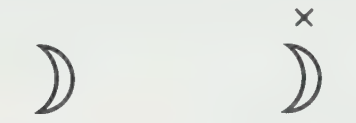
mind	brain
	
abstract	*concrete*

5. The Plural Indicator

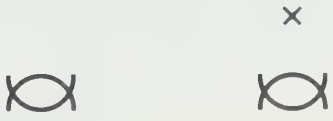
The *plural indicator* is a miniature version of the *multiplication* × symbol.

The *plural indicator* represents all of the different forms in which the plural is found in written or spoken language.

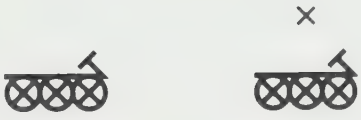
moon moon*s*



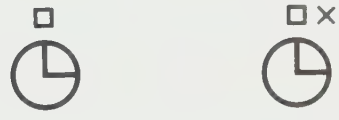
fish fish



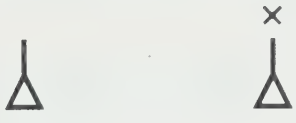
bus bus*ses*



clock clock*s*



woman wom*en*

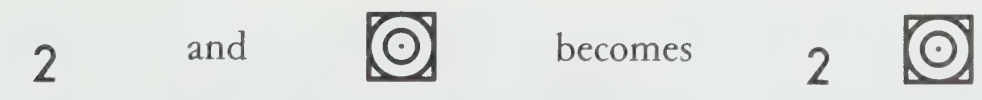


(a) Forming Plurals without the Plural Indicator

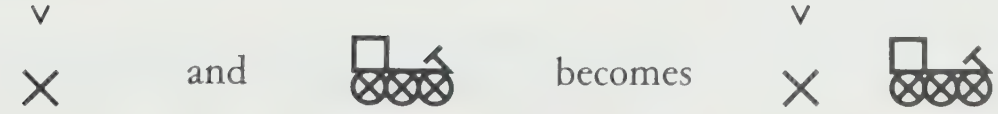
It's sometimes possible to represent a plural meaning *without* using the plural indicator.

A number or quantitative *modifier* may act as a signal that the symbol which follows has a plural meaning. In these instances the plural indicator can be omitted.

two camera two cameras



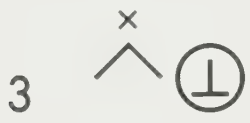
many truck many trucks



This pattern requires one less pointing motion, which speeds communication for any user, but particularly for one who is physically handicapped.

If the symbol user or instructor wishes to represent the plural of a symbol in a manner that parallels written or auditory receptive language, the plural indicator may be added above the symbol even if a number or quantitative modifier is present. The plural indicator will help emphasize that there is usually a difference in structure and sound between the singular and the plural forms of the word or meaning for which the symbol stands. For example:

three hats



many children



6. Description (Evaluation) Indicators

The *description (evaluation) indicator* is a miniature version of the *value, evaluation* symbol.

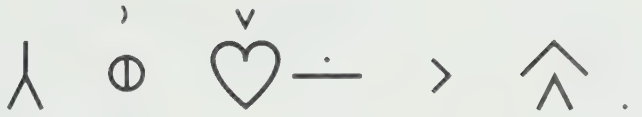


The value symbol represents a cone balancing unsteadily on its point. The configuration of the *description (evaluation)* indicator emphasizes the notion that descriptive terms always involve subjective value judgements. By nature such judgements are unstable and have a tendency to waiver back and forth between the positive and negative.

hot	happy
	
fire + representation of radiating heat + description indicator	*feeling "up" + description indicator*

Obviously, judgements relating to physical and emotional states vary from individual to individual.

The description (evaluation) indicator identifies a modifier in both the *adjective* and *adverb* forms. Syntax and context determine which form is intended.



(The) man was proud of (his) son.



He led (the) team proudly.

Additional forms of the description (evaluation) indicator allow for more precise meanings and permit the creation of a wider vocabulary.

(a) The Description-(Evaluation)-Before-the-Fact Indicator ˙∨

The *description (evaluation) before fact* is a miniature version of the *(to) be able, can* ˙∨ symbol.

This indicator denotes an evaluation made *before* an action takes place. The dot comes *before* the evaluation symbol.

(b) The Description-(Evaluation)-After-the-Fact Indicator ∨˙

This indicator denotes an evaluation made *after* an action has taken place. The dot comes *after* the evaluation symbol. In English, such meanings often end in *-ed* or *-en.*

breakable ˙∨	broken ∨˙
Before anything happens to it, a delicate object may be said to be breakable *or* fragile.	*After a blow has shattered an object, it may be said to be* broken.

mortal	dead
	
Before death (life + to cross out, to destroy) occurs, a living being is judged to be mortal.	*After life is destroyed, a creature is judged to be* dead.

Correct use of these indicators requires a fairly sophisticated understanding of the system. Instructors should feel free to present the symbols carrying these indicators to users without explaining in detail the rationale for the indicator. However, when the user is able to grasp the added meaning that the indicator brings to the symbol, the instructor can then focus on these indicators. All instructors should be aware of this aspect of the system and the potential it offers to advanced users.

B. The Possessive +

The symbol denoting *belongs to, of* (*possessive*) is a miniature version of the *addition* + symbol.

There are two forms for expressing possession in Blissymbolics.

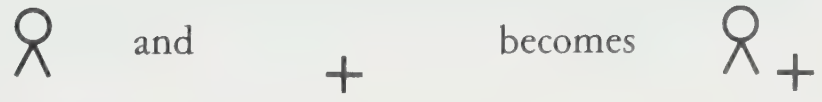
1. The Possessive: Form 1

In the first form, the symbol denoting the *possessive* is placed *after* the base symbol. This form corresponds to the usual English language method of creating the possessive, that is, by adding -'s to the base word.

Nouns

Singular:

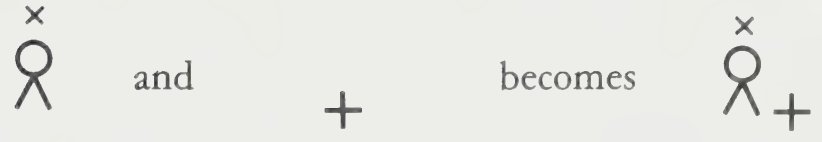
boy — belongs to, of (possessive)



boy's

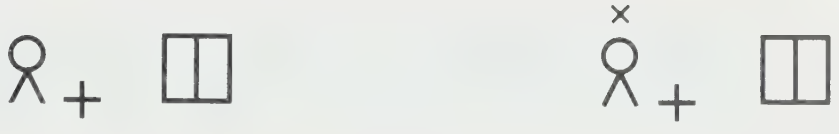
Plural:

boys — belongs to, of (possessive)



boys'

For example:



(the) boy's book or *(the) boys' book*

Pronouns

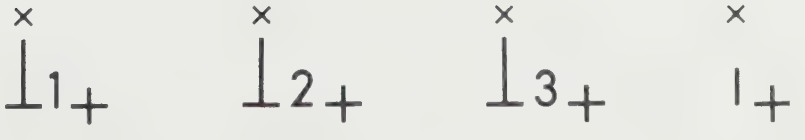
Singular:

my, mine — your, yours — his — her, hers — its



Plural:

our, ours — your, yours (plural) — their, theirs — their, theirs

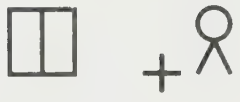


2. The Possessive: Form 2

In this form, the symbol denoting the *possessive* is placed *before* the base symbol. In some languages other than English, the equivalent of the phrase *of the boy* is the natural form of the possessive.

belongs to, of (possessive) + and boy becomes belongs to, of (possessive) boy + boy

of the boy



For example: *the book of the boy*

C. The Negative −!

1. *Not*

The symbol for *not* is derived from *minus, without (negative)* − and *intensity* ! .

The meaning of a symbol may be changed from positive to negative by placing the *not* symbol a full space before the symbol whose meaning is to be changed, for example:

not make-believe



−!

This could be one way of expressing the meaning *real* or *true*.

Not is also used before verbs in order to form negative statements, questions and commands. (See Chapter 5, page 56.)

2. *No* and *Yes*

The symbol for *no* $^{-!!}$ is derived from *not* $^{-!}$ and *intensity* $^{!}$.

The repetition of the *intensity* symbol emphasizes the negative meaning.

The symbol for *yes* $^{+!!}$ is derived from *positive* $^{+!}$ and *intensity* $^{!}$.
Here, the repetition of the *intensity* symbol emphasizes the positive meaning.

D. Question Symbols (Interrogatives)

Symbols involving the question concept make use of the *question mark*.

question	answer
	
open + question mark	*enclosure + question mark*

what



what thing	who	where
		
what + thing	*what + person*	*what + place*

why	when	which
?▷	?◷	?÷
what + cause	*what + time*	*what + part*

how	how much, how many
?∧	?×
what + action	*what + much / many*

These symbols are used to pose questions. (For word order and details on usage in interrogative sentences, see Chapter 5, page 54.)

E. The Relativizer ··

The *relativizer* is derived from the *ditto mark* and indicates repetition of a preceding item.

The symbol represents

- relative pronouns: *who, which, that* and
- subordinate conjunctions: *when, where* and *how.*

The word to be used when translating the relativizer is determined by the antecedent.



I saw (the) man who helped you.
(*who* refers to *man*)



We hung (the) picture that he wanted.
(*that* refers to *picture*)

CAUTION: In English, the words represented by the relativizer and the question symbols are the same. In Blissymbolics, the symbols make the distinction in meaning clear.



Where *is (the) house* where *we saw (the) fire?*
(interrogative) (relativizer)

F. Relationship

1. The Relation Symbols

The concept of *relation* is a prominent feature of Blissymbolics. There are two symbols that represent this concept.

relation — This symbol is derived from the mathematical symbol for *greater than*.



relation — This symbol is derived from the mathematical symbol for *less than*.



Compound symbols produced by repeating the *relation* symbols represent heightened meanings of the base symbols.

purpose and opposition



(a) Cause and Effect Symbols

cause		effect
		
Outline shape based on the relation symbol. The wedge presses into the thing on which it has an effect.		*The effect is the imprint left by the wedge-shaped symbol for* cause.

The half-sized symbol for cause and the question mark are used in the following relationship symbols:

why	because
	
what + cause	*components of* why *reversed*

(b) Some Other Symbols Representing Relationship

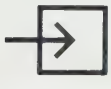
(i) Spatial and Temporal Relationships

before, in front of	between	after, behind
		
dot + reference line	*dot between reference lines*	*reference line + dot*

(ii) Temporal Relationships Only

early	during, while	late
		
before + time	*limits + time*	*after + time*

(iii) Spatial Relationships Only

into	out of	in, inside	out, outside
			
enclosure + arrow entering	*enclosure + arrow exiting*	*enclosure + dot inside*	*enclosure + dot outside*

over	under	on
		
reference line + dot above	*reference line + dot below*	*earth (half size) + pointer*

G. Big Meaning — Little Meaning

A symbol may have a big meaning and a little meaning or, as an instructor might see it, a primary meaning and a secondary meaning. The difference in symbol size enlarges or diminishes the meaning.

BIG MEANING	LITTLE MEANING
(to) own	(to) have
	
addition + earth + action indicator: to have an earthly addition	*half-sized symbol derived from (to) own*

I have a book does not indicate ownership outright, but it indicates a state of possession between this level and temporary ownership: it has a "smaller" meaning. In Blissymbolics this "smaller" meaning is indicated by minimizing the symbol for ownership.[1]

H. Particles

Particle symbols are used to indicate syntactical relationships. They are equivalent to the prepositions, conjunctions and articles of conventional languages. Many particle symbols are *little meaning* symbols derived from *big meaning* symbols.

Close attention to the *big meaning* from which a particle is derived will help users to select the correct symbol. The word associated with the symbol may have many idiomatic uses in English. The derivation of the particle symbol pinpoints its precise meaning and, as a result, the context in which its use is appropriate.

1. Particles Derived from the Relation Symbol

ORIGIN (Big Meaning)		PARTICLE (Little Meaning)
relation		about, of
	becomes	
relation		by, of
	becomes	
opposition		against
	becomes	

When the relation symbol is directed towards a fixed point new meanings are formed.

position		at
	becomes	

To arrive at the particles *either* and *or*, the dot appears within the relation symbol. This infers that we have not yet decided where to place the dot.

alternative		either
	becomes	
alternative		or
	becomes	

In English, the particle *for* has a variety of meanings. The Standard Blissymbol Vocabulary contains two symbols representing *for*.

purpose for

 becomes 

for

For example: He went a ride.

(purpose)

(to) exchange for
(in exchange)

 becomes 

for

For example: Thank you  the gift.

(in exchange)

2. Additional Particles

ORIGIN (Big Meaning)	PARTICLE (Little Meaning)
approach	to, towards

 becomes 

beginning

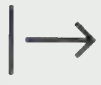


becomes

from



departure



becomes

away,
off



addition



becomes

and,
also



place



becomes

on



(earth + pointer)

3. A Particle Designated by a *Dot*

ORIGIN		PARTICLE
limited time, period		during, while
	becomes	

(limits + time)

If it were reduced to particle size, the symbol for *limited time, period* would be confusing graphically. A *dot* is, therefore, placed above this symbol to produce the particle symbol *during, while.*

I. Symbols Sequenced in Sentences



(The) children play / are playing in (a) park.

Note that the above sentence contains only the symbols necessary to convey the intended meaning. For instance, although symbols for the articles *the* and *a* are available in the Blissymbol vocabulary, they are not needed to understand the sentence. For individuals using Blissymbolics primarily for communication, excluding articles is a useful convention. The "listener" or receiver of the message can supply implied symbols when reading out the message.

For discussion of various sentence structures, see Chapter 5, pages 53–61 and Chapter 15, pages 112–113.)

J. Specific Ways to Expand Vocabulary

The Blissymbol system includes a number of techniques for expanding a user's vocabulary. These techniques are of particular value to physically handicapped symbol users whose restricted range of motion or deficient motor control may limit the number of symbols to which they have access.

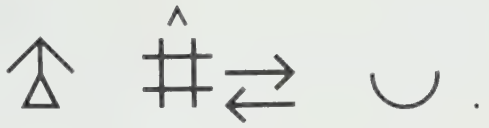
1. Extended and Related Meanings

One symbol may represent a number of synonyms or related words.

(to) say, tell	afraid	glue
		
(to) say, (to) speak, (to) tell, (to) report, (to) talk	*afraid, frightened, scared, alarmed*	*glue, paste, adhesive*

The particular meaning intended will depend upon the context in which the communication takes place.

The "listener" can help the user to enlarge his or her vocabulary by introducing synonyms or related words when interpreting a message.



cloth + to and fro

Possible Meanings
Mom wipes the container.
Mum cleans the dishpan.
Mother is polishing the vase.

2. Strategy Symbols

A *strategy* symbol has a meaning of its own and is also used in association with other symbols to derive new meanings. These symbols are often referred to as Special Blissymbols as they permit the user to express new ideas with limited vocabulary. A strategy symbol is usually placed immediately *before* the symbol with which it is associated. Some strategy symbols are integral parts of the system, and are sometimes used in *Semantography* (Bliss, 1965) as components of compound symbols. These symbols are described in detail in the following section, "Symbols Used as Strategies within the System".

Other symbols have been developed to enable users to meet a particular communication need. These symbols are described in detail in "Strategy Symbols as Communication Facilitators".

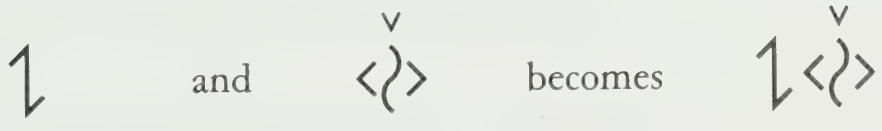
(a) Symbols Used as Strategies within the System

(i) Opposite Meaning. 

The symbol for *opposite meaning* is derived from the *up* ↑ and *down* ↓ symbols.

This symbol is used to create a meaning *opposite* to that of the associated symbol.

opposite meaning

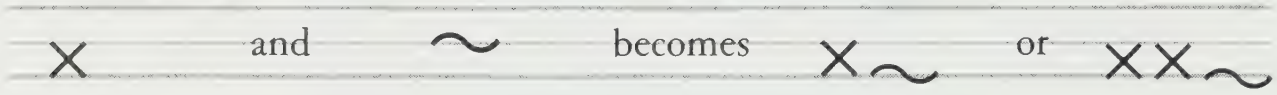


(ii) Group of, Much, Many. 

This symbol is a half-sized version of the *multiplication*  symbol.

The symbol is used to create collective meanings or meanings involving the idea of *quantity*.

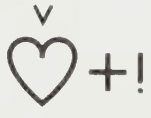
group of, much, many | water, liquid | lake | ocean

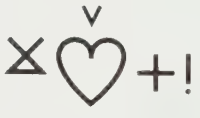


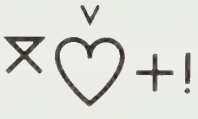
Symbols derived from *much, many* are used in the formation of the comparative and superlative.

more	most
	
much, many on a higher level	*much, many* on the highest level

For example:

good 

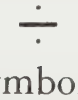
better 

best 

high 

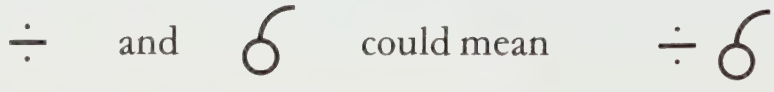
higher 

highest 

(iii) Part (of). 

The symbol for *part of* is a half-sized version of the *division* symbol.

part (of) | fruit



peel or *pit* or *skin etc.*

NOTE: The meaning intended here represents a particular part of a fruit.

(iv) Minus, without. —

The symbol for *minus, without* is a half-sized version of the *subtraction* —— symbol.

This symbol is used to create a meaning with *negative* content.

minus, without		sound		silence
—	and	2	becomes	−2

ear + earth, what the ear receives from the earth

minus, without		work		unemploy-ment
—	and		becomes	

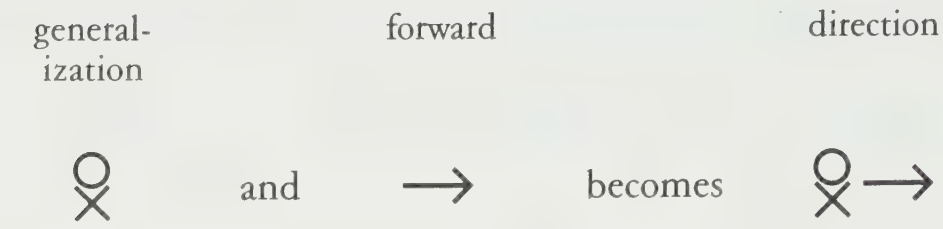
activity, repeated to heighten meaning

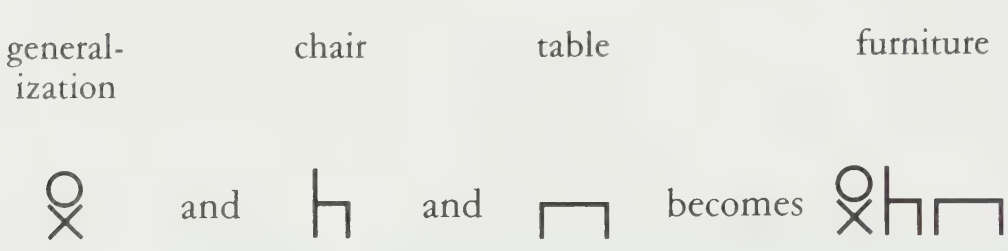
In English, such words often begin with the following prefixes: *dis-*, *in-*, *non-* or *un-*.

(v) Generalization. 

The symbol for *generalization* is derived from *(to) say*  and *group of, much, many* × .

We generalize when we want to characterize many things. The *generalization* symbol is used with one or more symbols from a class of meanings to create a symbol representing the entire class, for example:



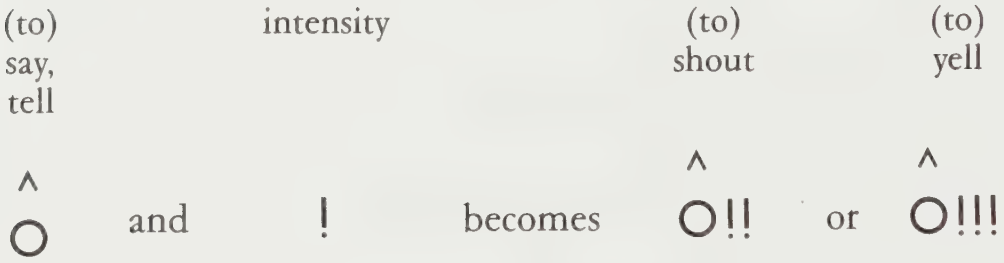


(vi) Intensity. !

The symbol denoting *intensity* is derived from the exclamation mark.

This symbol is used to heighten the meaning of an existing symbol.

NOTE: When used as a strategy symbol, the intensity symbol is placed immediately *after* the associated symbol. (For use of the intensity symbol to denote a command, see Chapter 5, pages 56-57.)



(vii) Metaphor.

The *metaphor* symbol is derived from the *person* ⊥ and *mouth* ○ and *flower* ⚲ symbols.

This symbol is used as a signal that the "flowery" figure of speech to follow is a metaphor and is not to be taken literally.

When used to create an individual symbol, the *metaphor* symbol is placed immediately before the first component of the associated symbol.

Literal meaning: 

lemon

As a metaphor: 

His car is (a) lemon.

When used with a phrase or sentence, the *metaphor* symbol refers to all the symbols that follow, and is placed before the first component of the phrase or sentence.

Literal meaning: 

Break (an) egg!

As a metaphor: 

Get cracking!

(viii) The Pointer. 

The *pointer* points to a detail of a symbol, or to a particular location. The pointer can be useful to an instructor or to a user with good pointing ability.

motor car pointer

 and could mean 

steering wheel

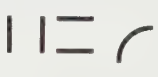
(b) Strategy Symbols Developed as Communication Facilitators

(i) Similar (to). 

This symbol is derived from *near, almost* and *same, equal* .

This symbol is used to create a new symbol with a meaning that is similar, in a general sense, to that of the associated symbol.

similar grass

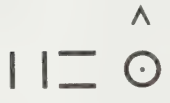
 and  could mean 

hay

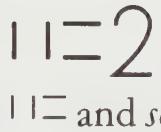
(ii) Similar Looking, Looks Similar (to), Looks Like. *Similar looking* is derived from the *similar* and *(to) see*  symbols.

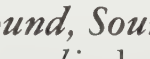
This symbol is used to create a new symbol that represents an object *similar in appearance* to the one denoted by the associated symbol. For example, if one were telling a scary story about a cave,

similar looking bird

 and  could mean 

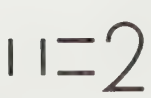
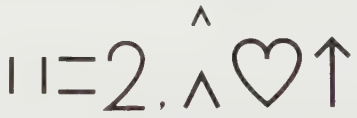
bat

(iii) Similar Sound, Sounds Similar (to). 

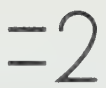
Similar sound is derived from *similar*  and *sound* .

This symbol is used to express a meaning that *rhymes with* or *resembles part of the sound of* the word accompanying the associated symbol. For example, in a pottery class,

similar sound (to) play

 and  could mean 

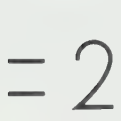
clay

(iv) Same Sound. 

Same sound is derived from *same, equal* = and *sound* 2 .

This symbol is used to create a symbol meaning that is a *homonym* (exactly the same sound) of the word accompanying the associated symbol.

same sound



and

hair



could mean



hare

NOTE: The strategy symbols *similar sound* and *same sound* create new symbols that are language-specific. They cannot be used for communication between persons with different native languages. They were developed for use in the symbol user's native language, and do not work between languages.

(v) Belongs to / with. 

Belongs to, of (possessive) is derived from the *addition* + symbol.

This symbol creates meaning by employing the *principle of association* for example,

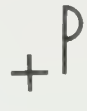
belongs to, of (possessive)



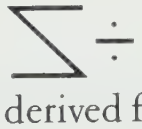
and needle



could mean



thread or *thimble*

(vi) Blissymbol Part. 

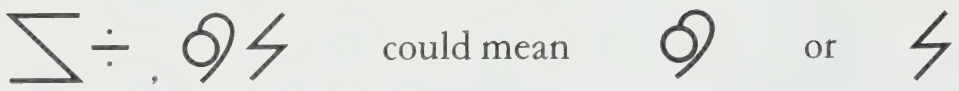
Blissymbol part is derived from *Blissymbol* and *part, piece* ÷ .

This symbol indicates that the meaning intended is represented by *one* of the component parts of the compound symbol.

Blissymbol part + telephone

language

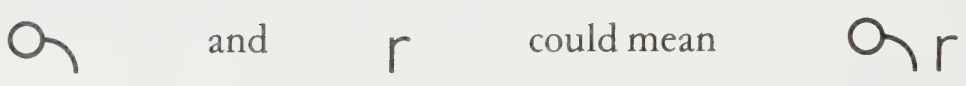
elec-tricity



All the special Blissymbols in Part (b) have been developed to meet particular communication needs. They usually rely for meaning upon the context in which they are used, for example,  in a comic book could refer to Superman or Batman or around Halloween time could mean a bat.

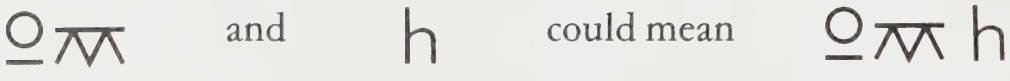
(vii) Letters. Letters added after a symbol make its meaning more specific. Either lower case or capital letters may be used, depending on which is most easily recognized by the user.

berry



raspberry

meat



ham

NOTE: As with *similar sound* and *same sound* strategy symbols, this technique is also language-specific.

(c) Indicators as Strategy Symbols

The *thing indicator*, *action indicator* and *description (evaluation) indicator* can be used as devices for changing the grammatical category of a symbol found in another form on a display. For example, by pointing to the noun symbol for *legs and feet* and then pointing to the *action indicator*, the meaning becomes *to walk* or *to go*. By pointing to the verb symbol for *to see* and then pointing to the *description evaluation indicator*, the meaning changes to *visual*.

(d) Combined Symbols

Users and instructors can create a symbol sequence, called a *combined symbol,* to express a meaning not available on the symbol display.

The *combine* indicator is a miniature symbol derived from the *(to) combine* symbol.

Combine indicators are placed *before* and *after* a combined symbol to signal that the symbol grouping is created for personal use only, and that it is *not* part of the BCI Standard Vocabulary.

Components of a combined symbol are sequenced.



operation
(activity + knife + medical)

(For further details regarding *combined symbols* see Chapter 16, pages 123–125.)

NOTES

1. See Bliss (1965), p. 122; and *The Book to the Film* Mr. Symbol Man (Bliss and McNaughton, 1975), p. 56.

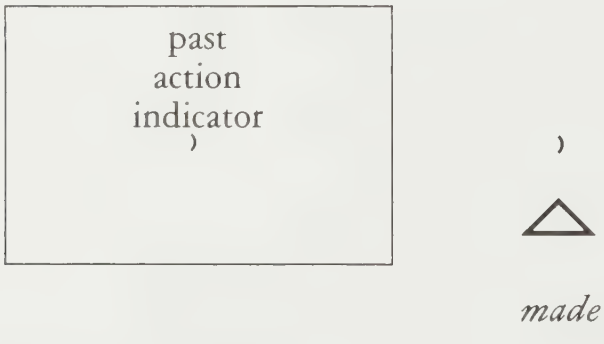


Chapter 5 Syntax

The syntax model presented by Charles Bliss in *Semantography* (Bliss, 1965) is built upon the simple declarative statement and a system of three tenses. (Other syntax models that have been developed are described in Chapter 12, pages 85–87.)

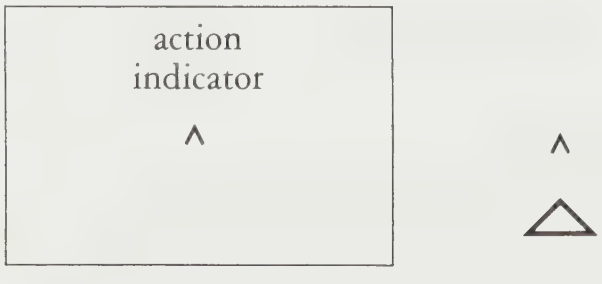
A. Tenses

1. Past Tense



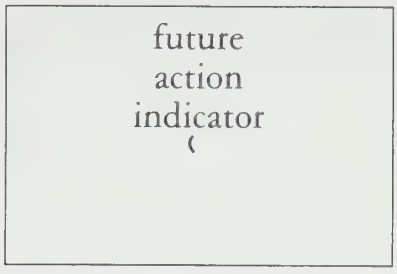
made

2. Present Tense



make, makes
(unmarked for tense)

3. Future Tense



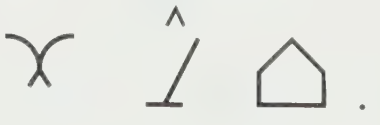


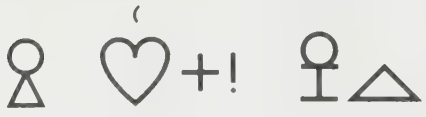
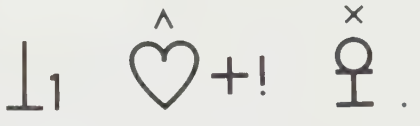
will make

The appropriate tense indicator for *past* or *future* is written over the verb symbol, replacing the *action* indicator. Only the *action indicator* is used for the *present*, and the tense is unmarked. (See Chapter 4, pages 24-26.)

B. Statements

The simple statement is the foundation for all of Bliss's sentence structures. The basic construction is: agent—action—object. There are four variations of the basic construction.

	1. Thing—Act (On / With) —Thing	2. Thing—Act (On / With) —Person
Formulae:		
		
	(The) bird needs (a) house.	*(The) animal helped (the) man.*

	3. Person—Act (On / With) —Thing	4. Person—Act (On / With) —Person
Formulae:		
		
	(The) girl will like (the) doll.	*I like children.*

C. Questions

In Blissymbolics, questions are either (1) open or general, or (2) specific.

1. Open (or General) Questions

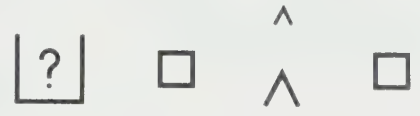
The order of the open question is: question symbol followed by a simple statement. The question symbol acts as a signal that what follows asks a question.

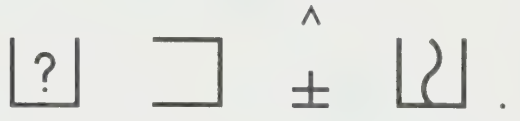
	Thing—Act (On / With)—Thing
Statement Formula:	
	
	(The) room has (a) fireplace.

BECOMES

Question—Thing—Act (On / With)—Thing

Open Question Formula:



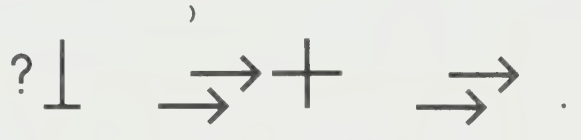


Does (the) room have (a) fireplace?
(subject – verb inversion)

The room has a fireplace?
(spoken language – intonational question)

2. Specific Questions

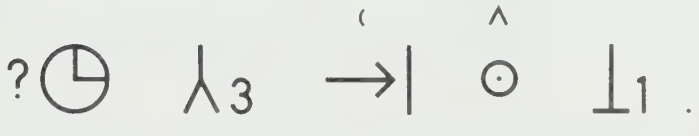
Specific question sentences begin with one of the symbols representing the interrogative words such as *who, what, how,* etc. The symbol order for these questions follows native language sentence patterns.



Who won (the) race?



How many eggs did you eat?



When will he be coming to see me?

(For additional interrogative symbols, see Chapter 4, page 33.)

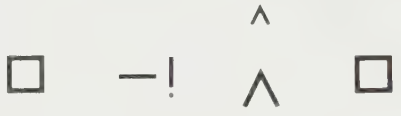
D. Negative Sentences

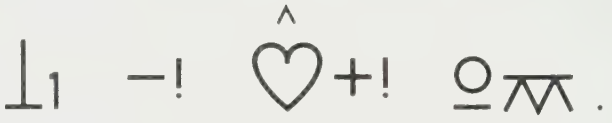
Negative sentences are formed by placing the symbol for *not* immediately before the action symbol.

1. Negative Statement

Person Not Act (On / With) Thing

Negative Statement Formula:





I don't like meat.

2. Negative Question

Question—Thing—Not—Act (On / With)—Thing

Negative Question Formula:





Aren't (the) insects destroying (the) grain?

E. Imperative Sentences

1. The Command

The imperative sentence (command) is introduced by the symbol for *command*.

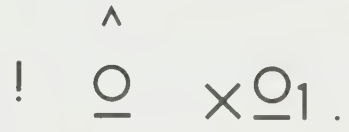
Command—Act (On / With)—Thing

Command Formula:





Sleep! or *Go to sleep!*



Eat (your) breakfast!

2. The Polite Command

The polite command is introduced by the symbol for *please*.

Please Act—(On / With)—Thing

Polite Command Formula:





Please follow me!

As in English, the subject of an imperative sentence (that is, a command or polite command) is *you*, understood but not stated.

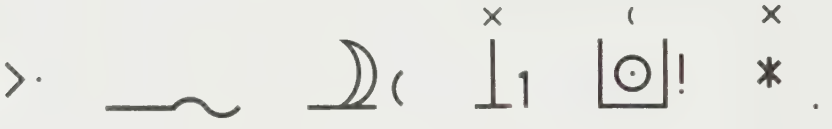
F. Expanded Sentences

Bliss's syntax prescribes the following order for an expanded sentence that contains information about place and time. Place and time come first followed by any of the basic sentence constructions.

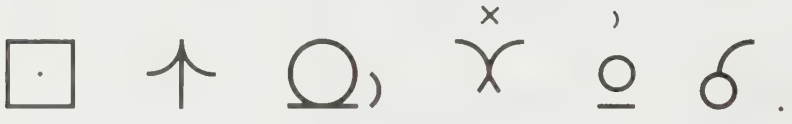
Place Time Person Act—(On/With)—Thing

Expanded Sentence Formula:





At (the) beach tomorrow night we will watch (the) stars.



In (the) tree yesterday, birds ate (the) fruit.

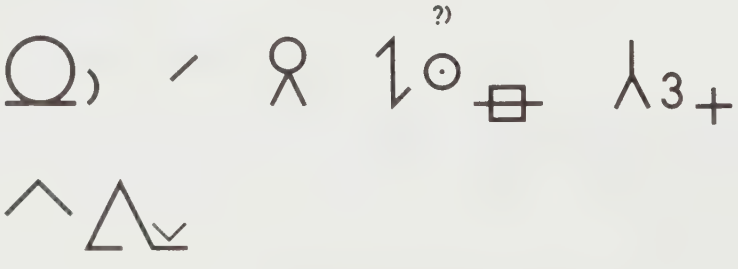
G. Conditional Sentences

In Blissymbolics, the conditional sentence expresses the idea of *may* or *might*. The quarter–sized question mark serves as the *conditional indicator*. In the past and future tenses, the conditional indicator *precedes* the tense indicator.

(a) Conditional Past Tense

past
conditional
indicator

?)



Yesterday, the boy may have lost his shoe.

(b) Conditional Present Tense

conditional indicator
?



She may have a pain.

(c) Conditional Future Tense[1]

future conditional indicator
?(



Next year, they might learn Blissymbols.

H. Active and Passive Voice

1. Active Voice

In the basic statement form (agent—action—object) the action is directed from left to right. That is to say, it is understood that action is in the active voice because of the sentence order. Thus, the *action indicator* and the *past* and *future tense indicators* are ordinarily used to express an active verb. However, the system also contains an *active indicator*.

active indicator
>

The *active indicator* is created by tilting the action indicator on its side, with its apex pointing to the right.

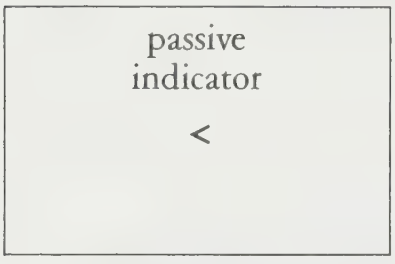
Instructors and users, may find the *active indicator* useful for emphasizing the idea that the *subject* is *acting upon* the *object*. For example:



(The) man is hitting (the) animal.

2. Passive Voice

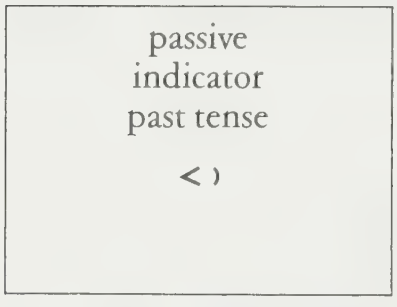
In the passive voice, the direction of the action in a sentence is reversed. The *subject* is *acted upon* by the *object*. The action is directed from right to left. The *passive indicator* is used to indicate the passive voice.



The *passive indicator* is created by tilting the action indicator on its side with its apex pointing to the left.

In Blissymbolics the passive voice can be expressed in each of the three tenses. In the past and future tenses the passive indicator *precedes* the tense indicator.

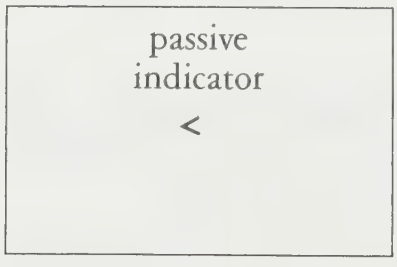
(a) Passive Voice Past Tense

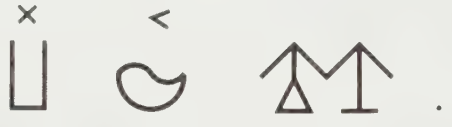




(The) house was destroyed by (the) wind.

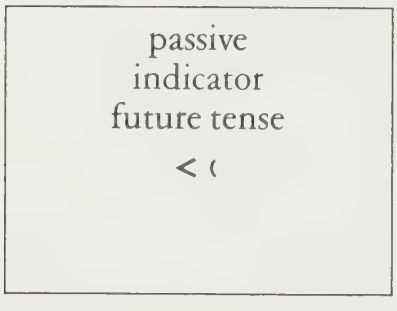
(b) Passive Voice Present Tense
(unmarked for tense)

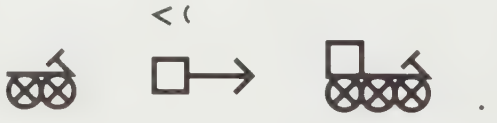




(The) glasses are being washed by grandmother.

(c) Passive Voice Future Tense





(The) car will be pulled by (the) truck.

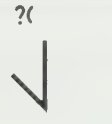
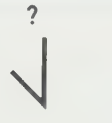
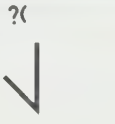
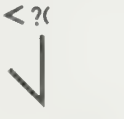
NOTE: The particle *by* is understood to be part of the meaning of any symbol carrying a passive indicator.

The following chart presents a summary of the order in all combinations of voice, tense and conditional.

Voice and Tense

		PAST	PRESENT	FUTURE
VOICE	ACTIVE	 *did touch*	 *am touching*	 *will touch*
	PASSIVE	 *was touched by*	 *am touched by*	 *will be touched by*

Voice and Tense and Conditional

		PAST	PRESENT	FUTURE
VOICE	ACTIVE	 *may have touched*	 *may be touching*	 *may touch (future)*
	PASSIVE	 *may have been touched by*	 *may be being touched by*	 *may be touched (future)*

NOTES

1. In 1983 the BCI standard form of the future conditional indicator was changed from (? to ?(to be consistent with the ordering of the other compound indicators.



Chapter 6 Blissymbol Shape Alphabet

A *Blissymbol alphabet*, based on shape, has been developed in order to give Blissymbolics its own ordering structure, independent of all other languages. The Blissymbol alphabet consists of 26 shape categories that have been identified within the system of Blissymbolics. (The last category is reserved for shapes from traditional orthography.)

Some alphabet shapes (such as those for *heart, building* and *wheel*) are simple symbols, while other alphabet shapes (such as lines on bases and acute angles) are segments of symbols. Some alphabet shapes (including arrows and squares) occur in several orientations, sizes and locations in relation to the earth and skylines. Just as the English alphabet determines the arrangement of words in an English dictionary, the Blissymbol alphabet establishes the ordering of symbols in *Blissymbols for Use.*

The rationale behind the Blissymbol alphabet is the grouping together, wherever possible, of symbols with similar semantic content. For instance, most of the symbols representing meanings associated with feelings / emotions appear together, since the first component of the symbol is usually the heart shape.

	wavy lines		open rectangles
	heart		right-angled triangles
	cross hatches		dot
	house		right angles
	ear		lines on a base
	arrows		crosses
	wheel		isosceles triangles
	large circles		acute angles
	small circles		horizontal lines
	large half circles		other lines
	other circle parts		the pointer
	squares	?!	punctuation,
	rectangles	0123	numbers and
	open squares	abc	letters

A. Using the Blissymbol Alphabet

The Blissymbol alphabet is useful both for gross scanning and careful cataloguing.

(a) Gross Scanning

Those unfamiliar with the symbol alphabet's fine coding can easily find symbols within the (symbol) alphabetically ordered listings. Besides the value to users of an alphabet specific to their communication system (see Chapter 19, page 163), ordering Blissymbols according to their component parts rather than by their accompanying words facilitates international usage, both by simplifying record-keeping and by expediting the preparation of publications or dictionaries in many languages.

(b) Careful Cataloguing (or Fine Coding)[1]

For cataloguing purposes, each Blissymbol alphabet shape has been assigned a code identification. Fine coding, by means of numbers and letters, indicates variations within a shape category. Understanding the complete coding structure enables the user (or instructor) to work with an existing catalogue of symbols efficiently and / or to create logically sequenced groupings of symbols for his or her own purposes.

NOTES

1. See Hehner (ed.), (1980), pp. 5–11, 204–208.

Chapter 7 Drawing Blissymbols

All Blissymbols are derived from a small number of basic shapes. They can be easily drawn by hand, making possible immediate recording of Blissymbol messages. Use of squared paper which provides spatial guidelines can facilitate greater accuracy.

Blissymbols can also be drawn using a template. This gives assistance in the precise representation of symbols for such purposes as in the preparation of student worksheets and reading materials.

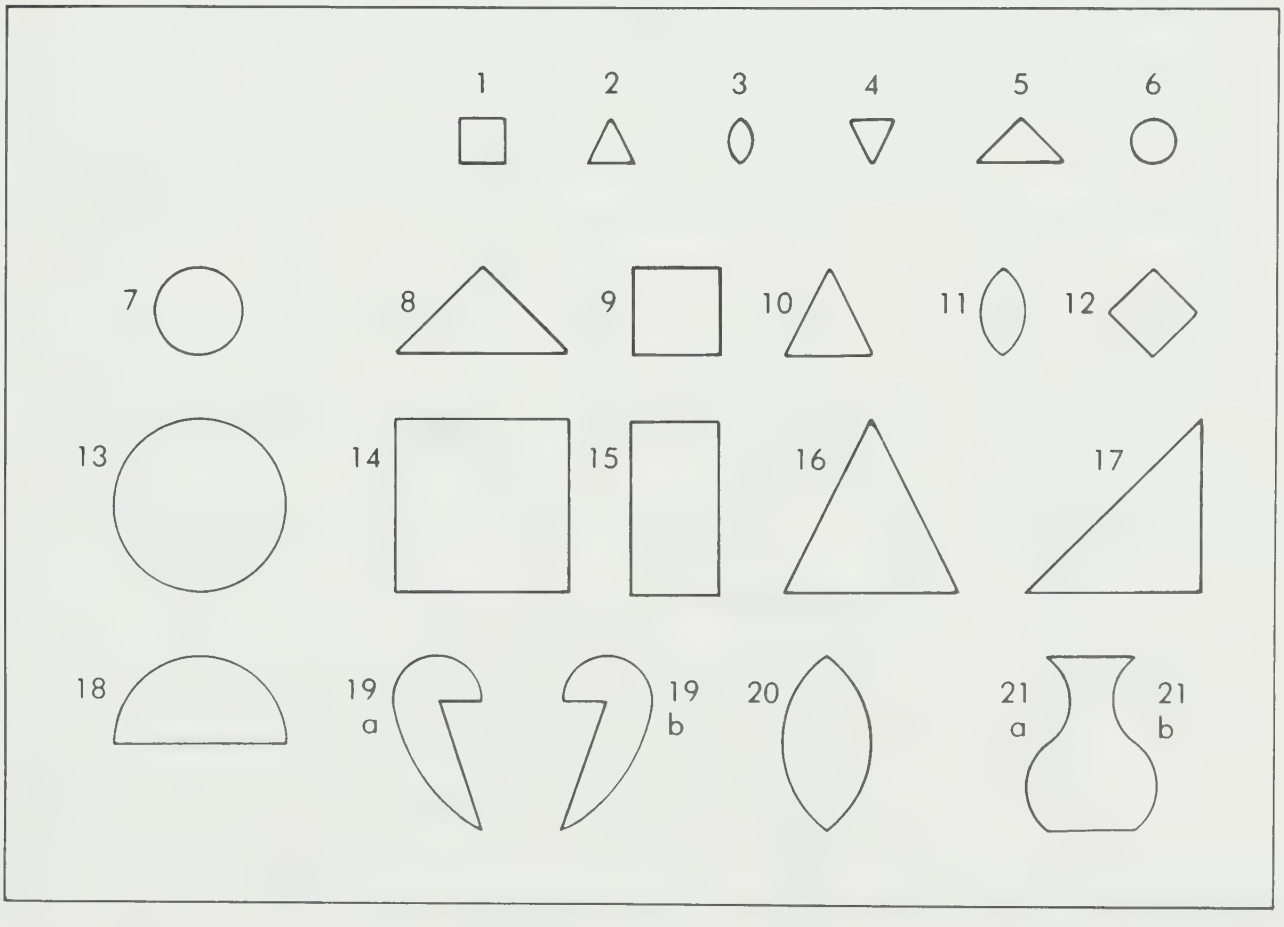
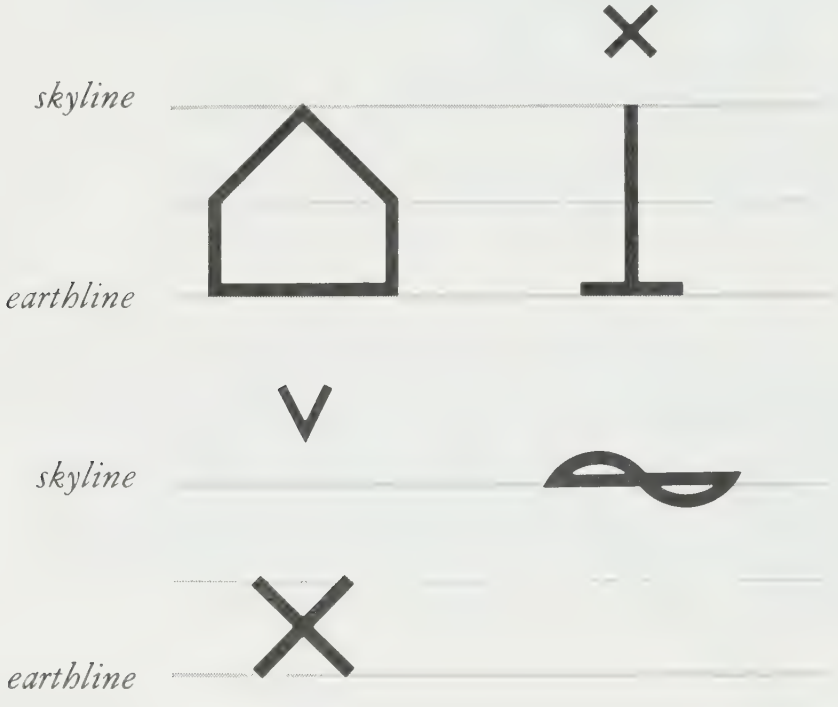


Figure 7-1: Template for Drawing Blissymbols

A. Guides for Drawing Blissymbols

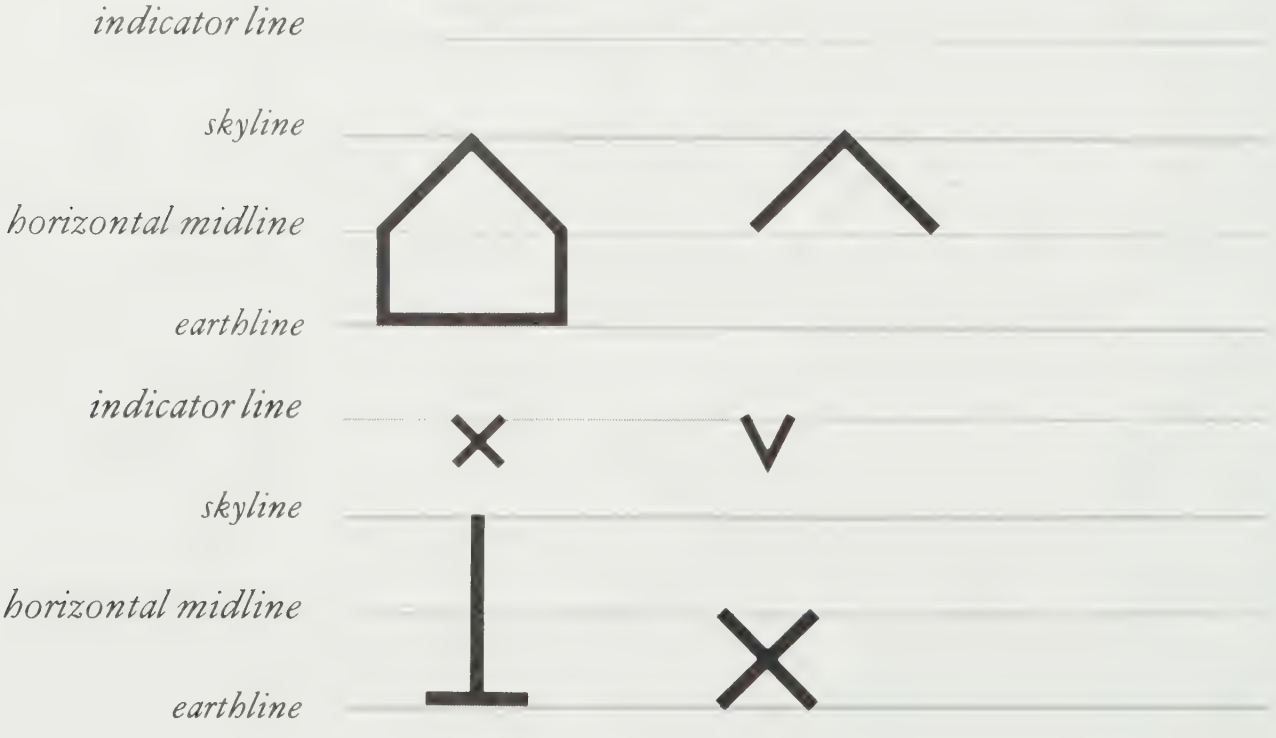
1. Skyline, Earthline

All Blissymbols are located in relation to the skyline and the earthline. Indicators are located above the skyline.



2. Other Horizontal Lines

Establishing a *horizontal midline* and an *indicator line* helps ensure that shapes are located correctly.



3. The Reference Square

A *reference square* is used as a guide to drawing individual Blissymbols. The *reference square* is a full-sized square. The top of the *reference square* lies on the skyline and the bottom lies on the earthline. The reference square is the same size and shape as the Blissymbol for *enclosure.* Indicators "hang" from the *indicator line,* located one-half of the full reference square above the skyline. The size of the indicator is one-quarter of the reference square.

drawing reference square *enclosure* (to) enclose



NOTE: Throughout a given piece of work, Blissymbols are drawn in proportion to the size of the chosen *reference square*.

As a guide to the more precise drawings for each symbol, the reference square can be divided into four segments horizontally and four segments vertically. Each segment can be called a quarter space, or a quarter reference square in either the horizontal or vertical dimensions.



horizontal segments *vertical segments* *reference square with segment guides*

Some shapes take up the full *reference square,* for example:

book



creation,
nature

sun



feeling,
emotion





Some shapes take up only part of the reference square, for example:

hand



mouth



(to) make

cloud



4. Meaning Components

Users and instructors must always be aware that the component parts of any Blissymbol represent *meaning*. It is therefore important that all drawings be accurate with regard to size, location, orientation, positional reference, etc.

size

sun

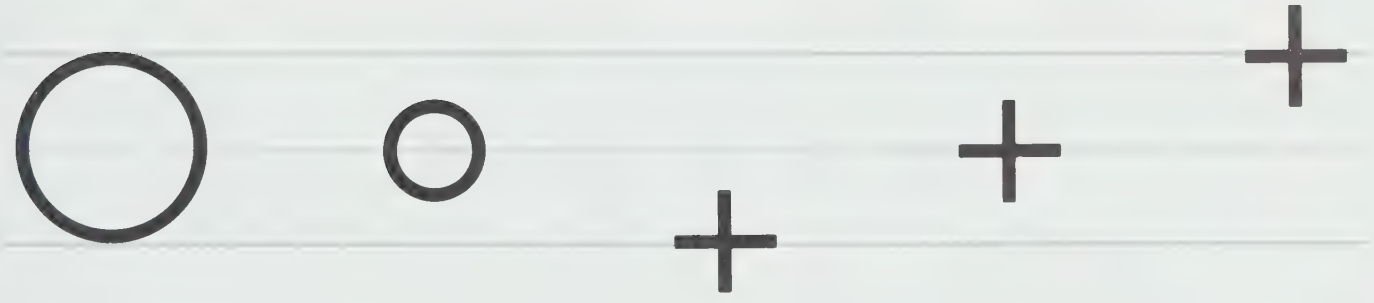
mouth

location

belongs to, of (possessive)

and

with (the help of)



positional reference

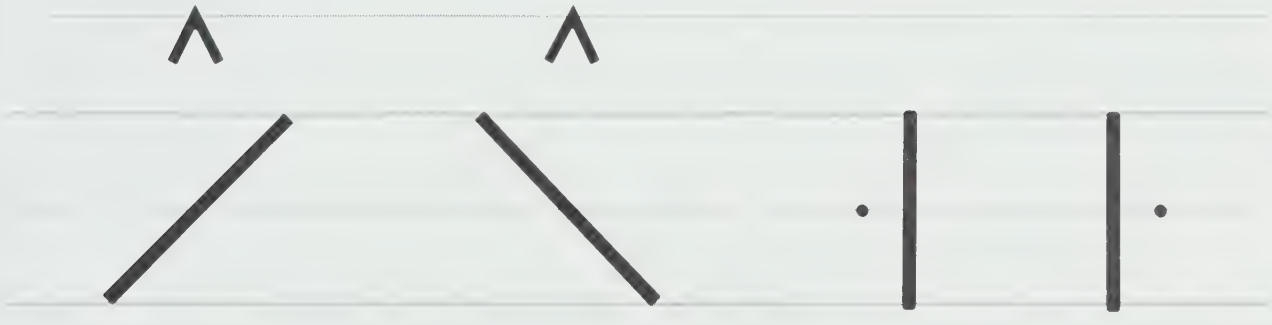
(to) destroy

(to) write

orientation

before, in front of

after, behind

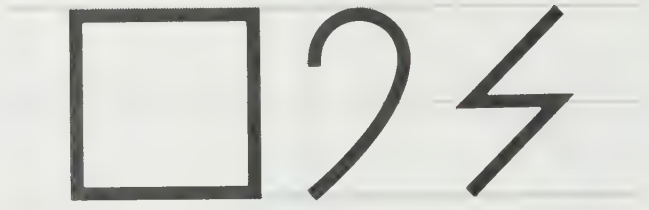


5. Spacing

Use the following spacing rules when sequencing the symbols within compound symbols and in sentences:

> ***Within a compound symbol,*** **components are separated by a space a quarter of the width of the *reference square.* The distance is measured from the last point of the first component to the first point of the second component, for example:**

radio



teacher



> *In a sentence,* symbols are separated by a space the width of a full *reference square.* Punctuation follows the last symbol in the sentence by a half-reference square, for example:



The pet drinks.

Further information on drawing Blissymbols may be found in the *BCI Independent Study Program* (BCI, 1985) and *Teaching and Using Blissymbolics* (McDonald, 1980).

Part II
Communicating

To the reader:

If this is your first exposure to Blissymbol communication, we suggest you read all the material in this section. You will also find the Glossary of Terms very helpful. If you are already familiar with Blissymbolics, you will likely wish to skim Part II, using the bold-face key ideas as summaries.



Chapter 8 How We Communicate

A. Introduction

People learn to communicate by communicating!

In their first year of life, babies participate in communicative interactions with caregivers. They establish social bonds; they focus together on an object or event; they participate in communication games; they laugh during familiar interaction activities.

Between twelve and eighteen months, children employ communicative gestures and vocalizations to seek attention and to request objects. At approximately eighteen months, they begin to think symbolically and to use words — singly, at first — purposefully in their communicating activities. At this age children make requests, respond to questions and ask for objects by name. By the age of three, children are involved in many types of communicative interactions, using words and nonlinguistic behaviour to convey requests, responses, descriptions, statements and to regulate their interactions. As young communicators, children demonstrate sensitivity to the listener's ability to comprehend. Their style is affected by the listener's age, role, relationship, inclination to listen and ability to comprehend.

Throughout childhood and on into adulthood, the ability to communicate is refined through communicating

- **with many people,**
- **on a variety of topics,**
- **for various purposes, and**
- **in different situations.**

The goal of communicating is to transmit meaning in a manner that represents what the sender wants to convey in a way that the receiver can comprehend. The

typical communication situation is characterized by the use of the native language system common to the participants, accompanied by nonlinguistic behaviour.

B. Communicating through Speech

In direct communication, speech is but one component within the total communication act as the speaker endeavours to transmit meaningful information to the listener.

Although for pragmatic reasons the roles of the speaker and listener are considered individually, it must be remembered that successful conversation requires that these roles be exchanged throughout the communication. Each partner must be adept at both roles. To enhance the transmission of meaning within an interactive communication situation, various behaviours are learned that facilitate the exchange of meaning between the two parties. Each partner develops skill in taking and giving the other partner a turn; indicating that a message has been misinterpreted and correcting it; perceiving when the other partner wishes to clarify or expand a point; etc.

Communicating is a shared interactive experience. At its best, both parties make a contribution to the experience and both derive satisfaction from it.

For the listener *communicating requires*:

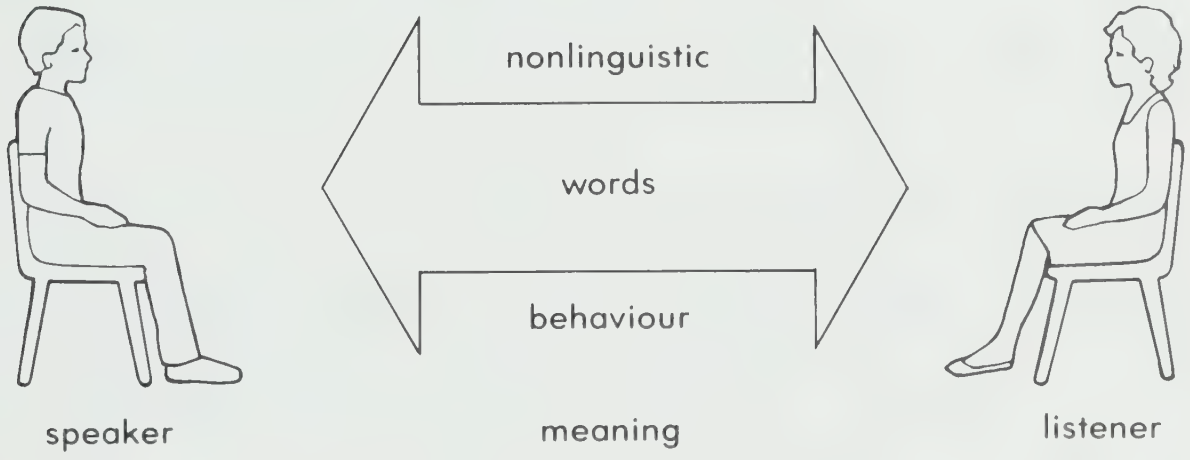
- **being willing to listen,**
- **interpreting the message,**
- **providing back-channel signalling and verbal feedback,**
- **comprehending the meaning being transmitted,**
- **responding,**
- **taking turns at the speaker's role,**
- **facilitating interaction through behaviours that support the participation of both communication partners**

***using words and nonlinguistic behaviour*, that is the shared language system.**

For the speaker ***communicating requires***:

- producing utterances that (a) adequately represent the meaning intended and (b) transmit information in a form that can be comprehended by the listener,
- interpreting and responding to utterances produced by the listener,
- facilitating interaction through behaviours that support the participation of both communication partners

using words and nonlinguistic behaviour, that is, the shared language system.





Chapter 4 Communicating with Blissymbolics

As nonspeaking persons begin using Blissymbols, an additional language system — one that is graphic — is introduced into the communication situation, changing the nature of the communication behaviour and the character of the utterances.[1]

Pointing to Blissymbols takes more time than speaking words, so communication is slower and fewer units of information are transmitted in a given amount of time. Skilful Blissymbol users learn to include symbols that are high in meaning content and to avoid wasting time pointing to symbols that add little or no information to the message.

Experienced listeners learn how to reinforce Blissymbol users effectively by confirming symbols, expanding concise messages into full utterances, providing ongoing back channel signalling and responding with verbal feedback. Through these activities the symbol user knows the listener is still listening. In this way the user receives clarification and can ensure that the intended meaning is being received.

Regardless of the differences between communicating with Blissymbols and communicating with speech, the goal of both remains the transmission of meaning. However, when one of the conversation partners is a Blissymbol user, adjustments must be made to the manner in which the partners exchange roles. There will be major differences in the way in which the Blissymbol user will provide back channel signalling and feedback, and in the behaviours that the Blissymbol user can utilize to facilitate the participation of both communication partners. The Blissymbol user's unique ways of showing attention and interest, in requesting clarification, in indicating desire to take a turn and in keeping the conversation flowing must be understood by the listener. They are just as important to successful communication as the content of the Blissymbol message. With Blissymbolics the process of learning to communicate through communicating takes on new dimensions.

For the Blissymbol user *communicating requires*:

- producing utterances that (a) adequately represent what the Blissymbol user intends, and (b) transmit information so that it can be comprehended by the receiver

using Blissymbols and *nonlinguistic behaviour;*

- interpreting utterances produced by the receiver

using words and *nonlinguistic behaviour;*

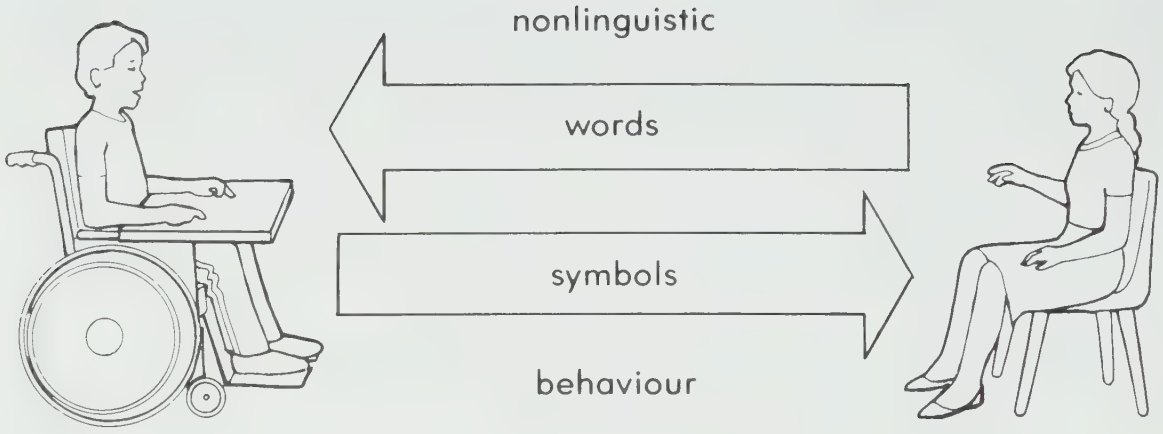
- responding to utterances,
- facilitating interaction through behaviours that support the participation of both communication partners

using Blissymbols and *nonlinguistic behaviour.*

For the Blissymbol receiver *communicating requires*:

- relating to the Blissymbol user in an accepting way, showing a willingness to receive a Blissymbol message,
- interpreting the Blissymbol utterance without anxiety,
- providing back-channel signalling; giving verbal feedback; and transposing into speech the message being composed by the Blissymbol user,
- comprehending the meaning being transmitted,
- responding to the Blissymbol utterance,
- taking turns in the role of speaker,
- facilitating interaction through behaviours that support the Blissymbol user's strong and active participation,
- responding to the Blissymbols *or* the *words* accompanying the Blissymbols

using words and nonlinguistic behaviour.



NOTES

1. Throughout this chapter, the typical communication situation described presupposes the Blissymbol user can see and hear and the receiver can see, speak and hear.



Chapter 10 Blissymbolics with Other Augmentative Communication Systems

Many individuals utilize Blissymbolics along with one or more other augmentative communication systems.[1]. The dynamics of the particular communication situation influence the manner in which Blissymbolics and other nonspeech systems are used with each other. Factors influencing the communication process include:

- the user's sensory / physical capabilities and knowledge of the system(s);
- the precision, detail, standard and character required of the message;
- the sensory / physical capabilities of the receiver; and
- the receiver's knowledge of the system(s).

For the Blissymbol user who combines the symbols with other augmentative communication systems, *communicating requires*:

- **deciding on the appropriate usage for each augmentative communication system,**
- **producing utterances that (a) adequately represent the intended message and (b) transmit information so that it can be comprehended by the receiver,**
- **interpreting utterances produced by the receiver**
- **responding to utterances,**
- **facilitating interaction through behaviours that support the participation of both communication partners**

integrating Blissymbols and other augmentative communication system(s) and nonlinguistic behaviour.

Not only do the Blissymbol users utilize formal augmentative communication systems and conventional nonlinguistic behaviour, they often enrich communication through idiosyncratic behaviour. Through time, this behaviour comes to represent meanings specific to the individual. Some of these behaviours, for example, the primitive reflex patterns common to people with cerebral palsy, result from the physical condition that has deprived the user of functional speech. Other behaviours, such as vocalizations, gestures and the duration and direction of eye gaze, are self-generated.

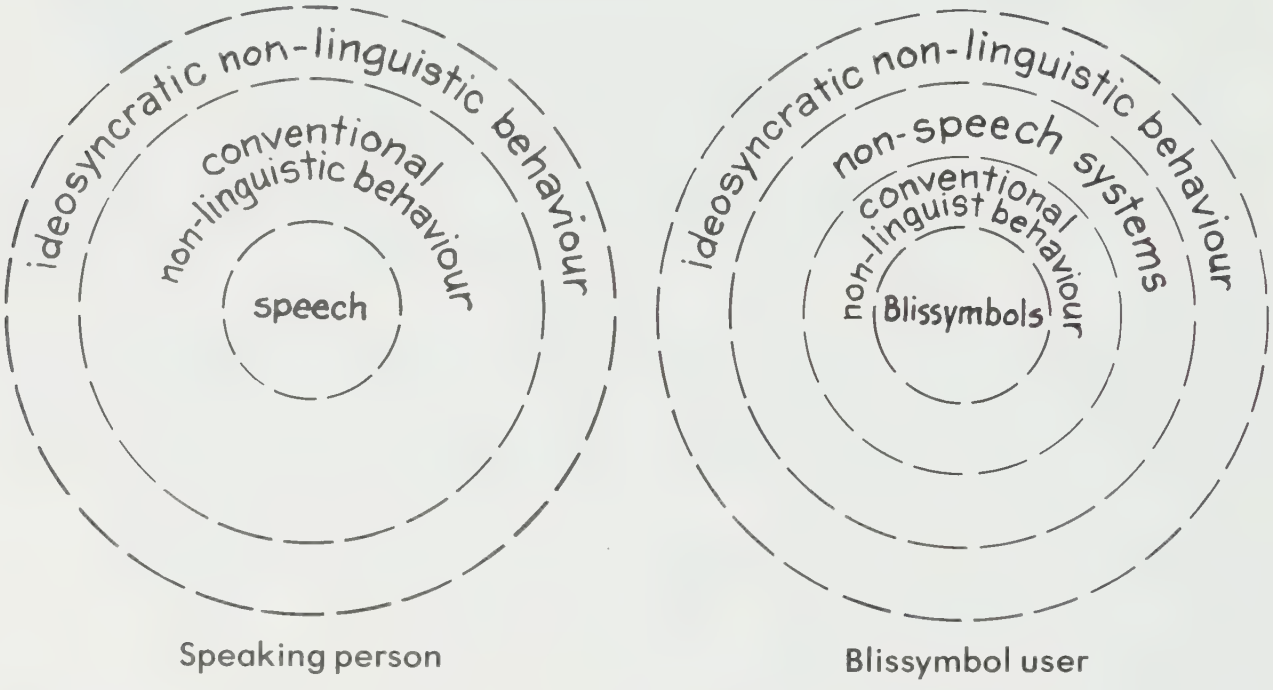


Figure 10-1: Communicative Behaviour: Speaking Person / Blissymbol User

NOTES

1. Examples of other augmentative communication systems include Ameslan, Signed English, Amer-Ind Code, VOCA (Vocal Output Communication Aid), word boards, spelling, commercially available picture sets (see Appendix 1) and individually selected pictures.

Chapter 11 The Effect of the System on the Sender, the Message and the Receiver

Added to all the factors that affect the communicating process is the influence of the actual Blissymbolics system on the behaviour of the sender and the receiver, and on the form of the message itself.

A. The Message Sender

Blissymbol users should be taught as many of the system's grammatical rules, strategies, and sentence-forming capabilities as they are able to comprehend and utilize. They should have various types and organizations of displays. By having several displays designed for particular purposes, the user should have access to symbol communication in any environment in which Blissymbols are feasible.

Blissymbol users require many different communicating experiences in each of the settings in which they interact. They should communicate for different purposes, on different topics and with people of different ages, roles and relationships to themselves. An awareness of the receiver's needs and the skills required of partners in interactive communication must be heightened for Blissymbol users. They must learn to send messages that not only are appropriate in form and content, but that also relate to the expectations and information processing capabilities of receivers. They must be sensitive and adaptable to the receiver's degree of familiarity with Blissymbolics and his or her ease in relating to physically disabled and / or communicatively handicapped people. As well, they must discover and become adept at the unique ways in which they, as nonspeaking persons, can facilitate interaction within the communication situation.

So that Blissymbol users may play an active role in each communication situation, the use of eye gaze and body cues should be encouraged. Effective use of nonlinguistic behaviour allows the Blissymbol user to begin to break out of the passive role all too easily assumed by nonspeaking persons.

To further support the symbol user in giving direction to the communication interaction, a number of Blissymbol Interaction Phrases have been created.[1] These

provide the Blissymbol user with ways of expressing communicative intent; repairing the conversation when communication has broken down; providing listener feedback; gaining control of the conversation when communicating; and maintaining or initiating a topic. The Blissymbol user gradually learns the concepts represented by these phases through many experiences of sharing the responsibility for effective communication with the message receiver (Light, 1984).

The Message Sender

Message senders require a knowledge of and comfortable access to their system that is

- **commensurate with their age and cognitive level;**
- **relative to their physical and mental capabilities;**
- **appropriate to their social environments; and**
- **relevant to the needs and capabilities of the message receiver.**

B. The Message

Since Blissymbolics is a graphic system that can be accessed through several media, the form of the message will vary according to the format in which the symbols are presented. Blissymbols may appear on printed displays to which the user points directly; on printed, coded displays for which the user designates the desired symbol by providing coded information as to its location; on a hard copy printout; on a video monitor; and in hand-drawn form. The number of symbols permitted by the medium and the manner in which they are organized for accessing by the user influence the length and content of the message. To the extent that the display allows, traditional orthographic punctuation is utilized within Blissymbolics messages.

The message is also affected by the two languages on which the communication is based. Both Blissymbolics and the native receptive language of the user influence the grammar, syntax and lexical sets appearing in the message. In addition, techniques and strategies from the two languages contribute to the different types of utterances.

The degree of emphasis given to either Blissymbolics or the native language is dictated by a number of factors, for example:

- the situation;
- the roles of the participants;
- the intentions of the message sender;

- time constraints;
- the user's ability to target symbols speedily and accurately;
- the receiver's familiarity with Blissymbols;
- the expectations of the message sender and receiver with regard to the role of physically disabled, retarded or brain-damaged nonspeaking individuals.

The Message

The graphic nature of Blissymbolics places several conditions upon the message.

The message transmitted by Blissymbolics, or any graphic communication system, is affected by

- **the means or medium by which the symbols are presented;**
- **the system of language rules to which the user conforms;**
- **the selection and ordering of symbols to convey intended meanings;**
- **the information arising out of lexical items that generally occur near each other and mutually generate meaning;**
- **the ability of the graphic medium to express the user's grammatical and lexical capabilities;**
- **the different kinds of utterances used according to varying situations, the roles of participants and the intentions of message sender; and**
- **different utterance styles, which are influenced by geographical, social, temporal, and personal factors (for example, the user's physical condition).**

C. The Message Receiver

The receiver of a Blissymbol message, can respond to either the symbols or the words. Typically, the receiver concentrates upon reading, interpreting and remembering the message being transmitted. If the message is being given by direct pointing or encoding, the receiver can record the symbols or words in writing as an aid to memory. Experienced receivers tend to wait for three or four symbols to be given before attempting to interpret the message. They provide back channel signalling by making short verbal and physical signals to indicate to the Blissymbol user that they are attending to the message and are interested in the communication activity in which they are both involved. For example, receivers may say, "ahuh" or "yes"; make eye contact; give a reinforcing smile; physically assist the

communicator's arm; or provide help by doing the fine finger scanning within a small group of symbols (Morningstar, 1981; Colquhoun, 1981).

The Message Receiver

Message receivers' effectiveness is dependent on

- **their experience in the system;**
- **an accepting attitude and an interest in a new and different system;**
- **a readiness or ability to adapt to the particular communication style of the user of a different system;**
- **their skill in processing visual information;**
- **general knowledge, as it pertains to the user and the topic. This knowledge is helpful in interpreting the utterance.**

In examining the act of communicating and the system's role in this act, we have discussed the many factors that act upon the form of an utterance. The Blissymbol instructor must consider all factors over which the symbol user can exert some control. Skills relating to these factors should be developed within the instructional program. Some of these skills can be reinforced through planned learning activities; however, as this chapter has emphasized, the most effective learning occurs through communicating. Grammar, strategies, syntax, use of lexical sets, different kinds of utterances and different utterance styles are best learned through direct experience.

NOTES

1. See Appendix 4 for the Blissymbol Interaction phrases as presented in the BCI 207 Symbol Core Vocabulary (Blissymbolics Communication Institute, 1984).



Chapter 12 Styles of Utterances

When speakers use their native language (hereafter English will be used for illustrative purposes), several styles of utterance can be identified. Depending upon the situation, the utterance will be formal or informal, expanded or concise, oral or written. The range of nonlinguistic behaviours used, the form the utterance takes and the balance between the language system and nonlinguistic behaviour will be influenced by the collective communication experience of English-speaking persons, the conditions surrounding the specific communication situation and the conventions of the English language.

In using Blissymbolics, the form of the utterances will vary from one situation to another, but for different reasons. In some instances, the form will be affected by the instructor's knowledge of Blissymbolics; in others, the instructor's expectations or those of the user's family regarding output will influence the form; or the example provided by fellow users will be the most determining factor. Convention will have little influence on the form of the utterance. Owing to the short time period in which Blissymbols have been used and the wide geographic spread of Blissymbol users, established conventions have not yet been developed. However, several models for the selection and ordering of symbols within utterances have evolved. These models influence vocabulary selection, display organization and the instructional approaches to be used.

As Blissymbol communication continues and more extensive documentation of Blissymbol utterances is undertaken, syntax models based upon usage will be identified. These will be influenced not only by theoretical models, but also by the requirements of successful interactive communication.

A. Theoretical Syntax Models

After more than a decade of Blissymbol communication by English-language persons who lack functional speech, the following models have been identified:

- Bliss model
- Developmental model
- English model
- Telegraphic model

1. The Bliss Model

The Bliss model was formulated from *Semantography* (Bliss, 1965), and has been presented in BCI publications and training materials over the past decade. A full description of Bliss' syntax model is given in Chapter 5. The principal features of the Bliss model include: simple tense indicators (past, present and future), questions and commands signalled at the *beginning* of an utterance, negatives appearing prior to verbs and the absence of verb auxiliaries.

2. The Developmental Model

The term *developmental model* is borrowed from literature related to the development of speech in the young child. In applying the model to Blissymbol communication, the first stage relates to the use of single symbols to communicate an entire event. These single-symbol messages are the equivalent of holophrases, the single word messages produced by young speaking children.

Single Blissymbol	**Possible Intended Meanings**
	*I want food.* *I don't want food.* *I like this food.* *Give me some food.* *etc...*

The second stage for Blissymbol users is the production of symbol strings. These are usually two or three symbols in length, although they can be much longer. At first these strings are nonrule governed, for example, they are a series of symbols pertaining to a message, but they are not grammatically related. Gradually, rule-governed messages appear and semantic-grammatical relationships can be identified within Blissymbol messages.

(a) Two Symbol Utterances

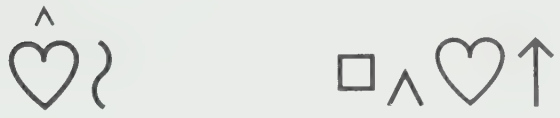
(i) Nonrule-Governed Utterances

food	toy	**Possible Intended Meanings**
		*I don't want any more food.* *I'd rather go and play with my toys.*

Although the preceding message involves two symbols, they are not grammatically related. Instead, they pertain to two thoughts or sentences.

(ii) Rule-Governed Two-Symbol Utterance

(to) want toy



I want the toy.

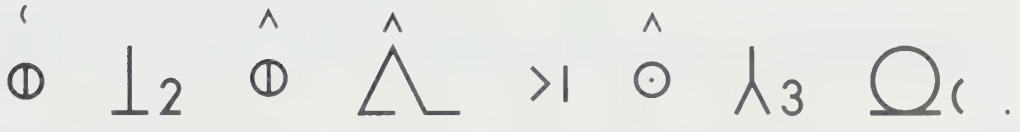
In this instance, the two symbols are grammatically related, one serving as the verb, the other as the object of the verb.

3. The English Model

Symbols in the English model are sequenced in a relationship parallel to spoken English. Articles, auxiliary verbs and function words are included in the Blissymbol message, so that the message resembles an English utterance.



I did read all the books.



Will you be going to see him tomorrow?

4. The Telegraphic Model

In the telegraphic model the only symbols used are those needed for the transmission of essential meanings. Heavy reliance is placed upon environmental and contextual clues to provide supportive information. The message is given as briefly as possible the first time, with additional information being supplied if required. For example, in the following utterance the symbols for *I*, *the plural indicator* and *in* would only be given if needed to clarify the meaning.



I like looking at the birds in the trees.

B. Looking at Blissymbol Communication Developmentally

The four preceding models can be used to chart the Blissymbol user's development and facility in using the symbols. Some users may progress through the single symbol and two-symbol stage characteristic of the developmental model to the Bliss model. Others go from this early stage to the telegraphic model; still others go on to the English model.

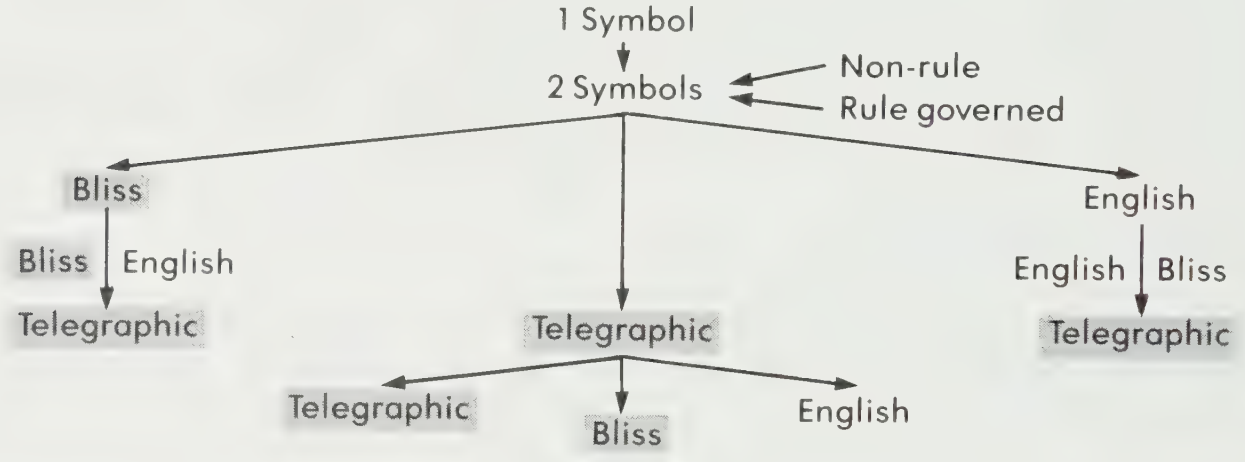


Figure 12-1: Theoretical Syntax Models

Whatever model users may choose for most of their communication, they can still benefit from knowledge and use of the other models within certain situations. For example, an individual who regularly uses the Bliss model could well prefer to use the English model when communicating with a stranger who expects full English sentences.

When considering the relative suitability of the preceding syntax models for a particular user, the following factors must be taken into account:

1. The user's cognitive level, language-level experiences and communicative skills.
2. The effect of the user's abilities upon his or her learning and use of different syntax models, for example, the ability to plan and formulate lengthy messages and learn patterns in ordering symbols.
3. The other mean(s) of communication being used in conjunction with Blissymbols, for example, speech, manual signing, spelling, printed words, pictures or eye and facial expressions.
4. The Blissymbol user's communication environments.

Just as the style of spoken English is governed by situation or setting, so it is for Blissymbol utterances. The following considerations, presented by J.L. Mills and J.C. Higgins in their workshops on nonoral communication, offer a useful structure for evaluating communication environments:[1]

- How tolerant is the new environment?
- How adaptable is the environment to different communication systems?
- How visually and auditorily understandable is the communication system in the new environment?
- How familiar is the environment with the nonspeaking person and with the nonspeech communication system?
- How many interacting individuals are in the environment?
- How necessary is the environment to the nonspeaking person?
- How easy or difficult is it to complete communication in this environment?

5. The manner in which Blissymbols are accessed.

The speed of communication affects the selection of syntax models. It varies with the manner in which the symbols are indicated, for example, direct selection, eye encoding, electronic scanners or paging systems. The model chosen must provide the fastest possible transmission of the message. The listener's interest, attention and receiving capability decrease as the time taken to produce the message increases.

6. The main purpose of communication for a Blissymbol user in a given situation.

The primary purpose of communication could be any or all of the following: giving information, requesting information, encouraging or motivating the listener to do something and / or expressing feelings.

7. The nature of the feedback.

- Will the message receiver always be present to provide immediate feedback?
- Will the receiver see a continuous message on a video display terminal, thereby receiving ongoing feedback?
- Will the receiver respond to a message on a printout or terminal display in the form of delayed feedback?

The telegraphic model can be extremely efficient in situations where time is limited and the message receiver knows the message sender and the system well.

The Bliss model can be used effectively for day-to-day conversation situations in which the rules of the system are known by the message receiver and the differences between Bliss and English syntax accepted and understood.

The English model can be appropriate in environments in which the user wishes to use the language patterns of the speakers present; in conversation with strangers who are uncomfortable without the structure of English language patterns; and for language and reading programs requiring a one-to-one correspondence between words and symbols.

Whatever becomes the individual model preference, it's advantageous for every user who is capable of learning more than one model to be familiar with all three more advanced models. Each has advantages, and through an understanding of their best applications, users can increase the effectiveness of their communication in different situations.

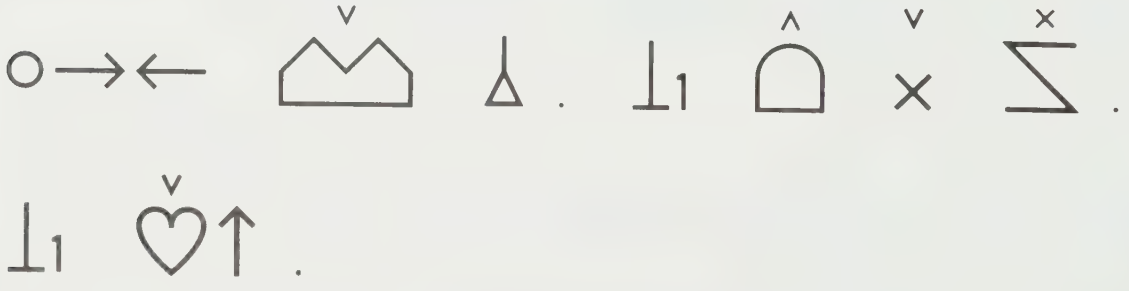
C. Examples of Utterances

The following examples of Blissymbolic utterances are taken from users who prepared individual messages for Princess Juliana of the Netherlands prior to a visit to the Hugh MacMillan Medical Centre (formerly the Ontario Crippled Children's Centre). Although each message is unique, some common features can be identified:

- The use of initial consonants for specific names, countries, foods and so forth.
- The omission of function words, auxiliary verbs and the verb *to be*.
- The use of Blissymbols to depict general concepts, for example, *head* for *hair*.
- Placing the classifier first within a combined symbol.
- In general, following English sentence order.
- The use of descriptives both preceding and following the symbol being modified.
- The use of the *question* symbol at the beginning of a sentence, as in the Bliss model.

Five Examples of Symbol Utterances

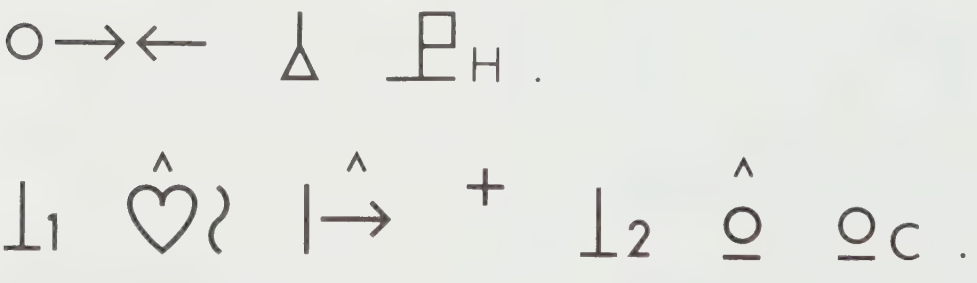
Message 1



Translation

Hello Royal woman. I know many Blissymbols. I happy.

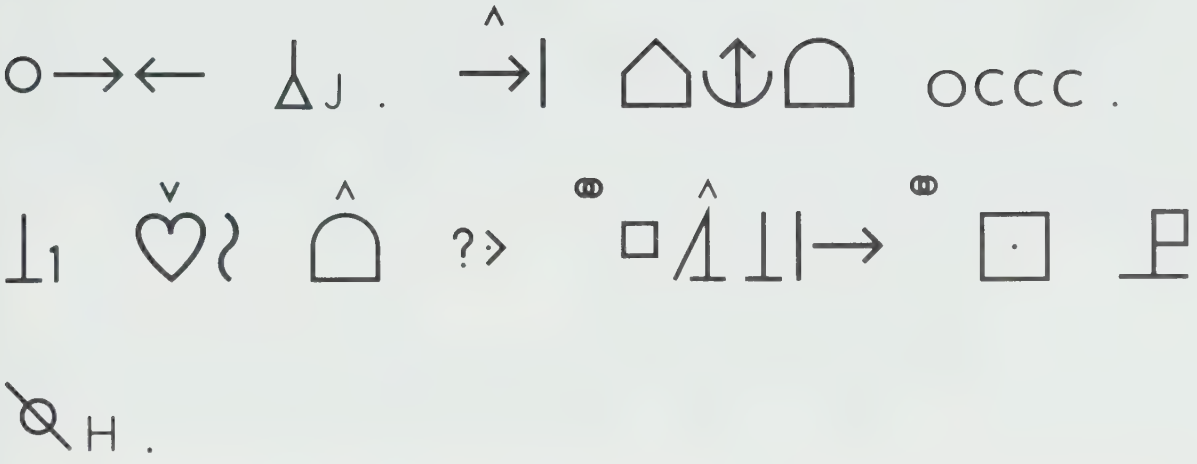
Message 2



Translation

Hello woman country H. I want to go with you to eat food C.

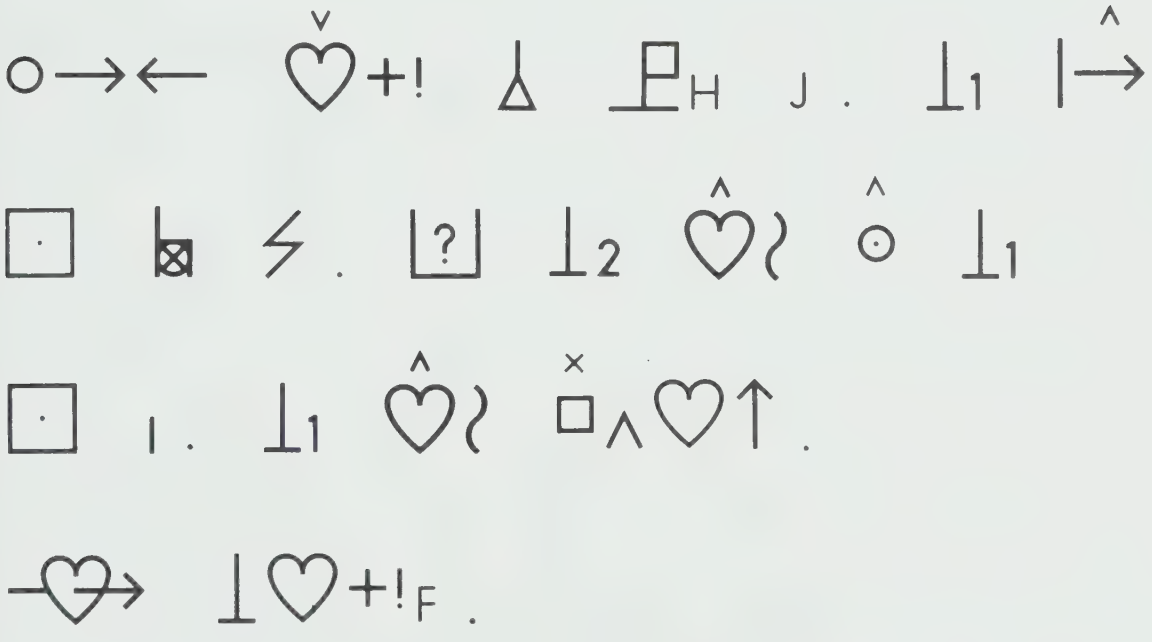
Message 3



Translation

Hello woman J. Come school OCCC I want to know if (you have) "thing help person go" in country named H.

Message 4



Translation

Hello good woman (from) country H. (named) J. I go in wheelchair electric. Question you want to see me in it? I want toys. Love friend F.

Message 5





Translation

Hello woman J. Question you know Blissymbols. Question you go in airplane. I get Blissymbols for to talk. Question you get snow. I go to swim. Family have relative in country H. I came Blissymbol room 5 years.

As the preceding messages illustrate, no one model is used by Blissymbol users; rather, an eclectic approach seems most functional. The communication situation, the needs of the listener, the proficiency of the user, the possibility for nonlinguistic behaviour and the use of other systems all influence the form of the message.

D. Summary

If the past years are any indication, much will be learned from the Blissymbol communication of the next several years. As symbol users and their listeners discover ways of selecting and ordering Blissymbols that are most effective for communication in varying situations, usage conventions will develop. An exploring attitude and approach to communicating is more important than adherence to a particular model.

Above all, Blissymbol users must be encouraged constantly to ask themselves the following two vital questions:

1. "How can I use all my resources to best transmit the meaning I intend in this situation?"
2. "How can I and my communication partner support and encourage each other to ensure active involvement and role-sharing by both of us in the communication situation?"

NOTES

1. J. L. Mills and J. C. Higgins, "Non-Oral Communication System Guidelines." Paper presented at workshop on nonoral communication; Palomar College, San Marcos, California, 1979.

Part III
Programming



Chapter 13 Where to Begin

"Where do I begin?" is the question faced by every new Blissymbol instructor. There are three sound basic answers to this vital question:

1. **Learn as much as possible about your student and his or her essential and valued environments.**
2. **Learn as much as you can about augmentative communication systems and how they function.**
3. **Do what is necessary to provide your student with the capability to communicate as fully as possible within his or her environments.**

Programming for a student is a long-term endeavour that will be undertaken by several instructors during the student's educational years (or the period of communication instruction). Each instructor must consider the options available in the many alternative forms of augmentative communication and must choose those that are appropriate, always remembering the investment that the individual has in his or her current system and that the needs of an individual change, and are affected by the situation, the individual's age and the people with whom he or she interacts. The 1970s and 1980s have seen many new forms of communication developed. And such development is ongoing. As a result, the instructor must keep sufficiently informed about the available systems and the student's situation in order to make appropriate matchings between the two.

In the early years of a student's communication program, planning and decision making should be shared with family members or those with responsibility for the student's day-to-day well-being. As the student becomes more experienced, however, it is essential that he or she be involved in this ongoing process.

A. The Student

Information pertaining to the communication needs and potential of the student can be gained through

- consultation with those who play a significant role in the student's life;
- diagnostic teaching by the instructor;
- formal assessment, where appropriate, by a psychologist, speech pathologist, educator and occupational therapist;
- informal assessment by the same professionals; and
- interdisciplinary team evaluation and discussion.

> **Formal and informal assessment of the student, along with program evaluation, should take place throughout the student's instructional program in order to accommodate changes in the student, the environment and the augmentative communication systems.**

Several approaches to assessment have been described. Kates (1984) looks at the increasing value and relevance of assessment as the student moves along the continuum of communication development. She considers three stages in this development to be important periods for assessment: (1) before the establishment of a communication system; (2) during the period of communication instruction; and (3) at the time when the student communicates fluently.

Shane and Bashir (1981) focus upon a distinction between *election* and *selection*, dealing first with the information required before a decision can be made about use of a nonspeech system (election) and then examining how the specific system can be selected for the student (selection). They provide an election decision matrix to guide the assessment team through the cognitive, language, motor, emotional, age, history and implementation factors that need consideration. Parnes (1981) expands the election / selection paradigm to include system design. Her attention to the interrelationship between election / selection and system design brings a new and important dimension to the assessment process. Eugene McDonald (1980) approaches assessment by asking the following questions:

- How does the child attempt to communicate?
- About what does the child attempt to communicate?
- With whom does the child attempt to communicate?
- How does the child react when attempts to communicate are unsuccessful?
- What are the characteristics of the child's cognitive perceptual functioning?

B. The Environments

The home or residential setting, the school or work setting and the community and recreational settings frequented by the student must all be taken into account in the communication instructional program. In discussing this topic, Mills and Higgins (1979) have outlined several questions to be considered. Some relate to the physical characteristics of the student's environments, while others relate to the people in these environments.

- How clearly can the communication system be seen and heard in the environment?
- How easy or difficult is it to complete communication in the environment?
- How necessary is the environment to the nonspeaking person?
- How tolerant, adaptable, and familiar with the nonspeaking person are the people in the environment?
- How many interacting people are there in the environment?

C. Augmentative Communication Systems

Figure 13–1 shows a model for an augmentative communication system.

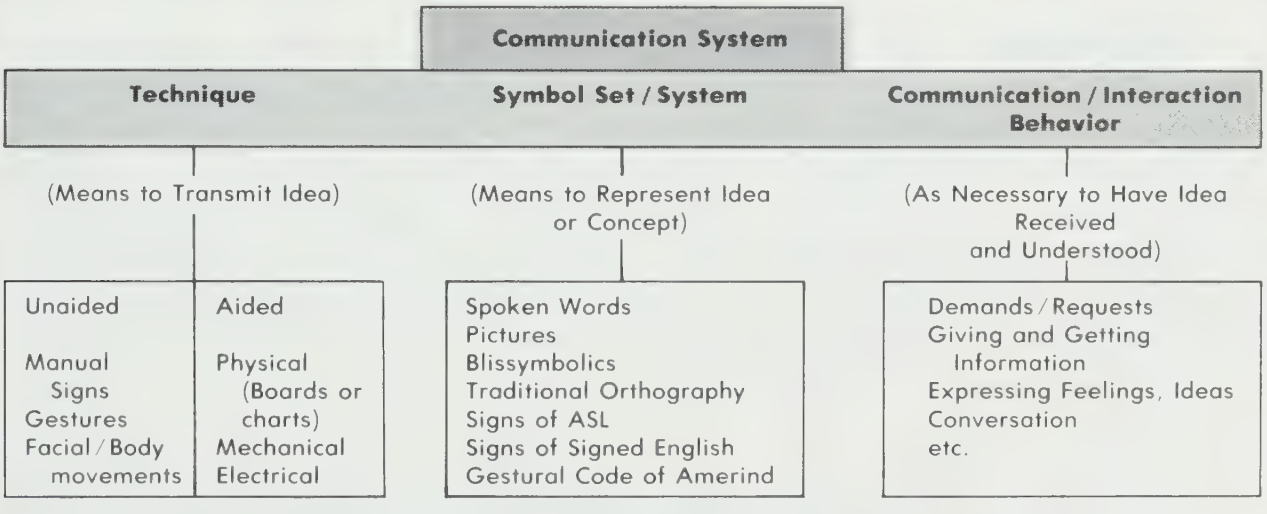


Figure 13-1: Augmentative Communication Systems Model

Source: "Nonspeech Communication." Position paper of the American Speech-Language Hearing Association (ASHA). April 1980, p. 578.

The comprehensive nature of such a system is of particular importance. An augmentative communication system embraces three major areas: (1) the technique, which may or may not include a technical aid; (2) the symbol set, which may or may not be traditional orthography; and (3) the communication / interaction behaviour, which involves both the communicator and the person (or persons) to whom the communication is directed. Each component is critical to the success of the system.

Less obvious, but just as important, is the dynamic and interactive nature of the system's components. There are five areas that are particularly influenced by this factor: (1) the effect of the technique or symbol set upon the nature of the interactive behaviour; (2) the extent of the system's usage; (3) the attitude toward techniques, symbol sets and behaviour patterns considered normal within the student's environment; (4) the manner in which techniques and symbol sets adapt to suit the environment; and (5) the interactive behaviour associated with the environment. All of these areas must be examined throughout the student's augmentative communication learning program.

Decisions regarding technique, the symbol set and planning with respect to communication / interaction behaviour constantly challenge the instructor. The instructor must re-evaluate such decisions as the student matures. This re-evaluation demands growing knowledge, sensitivity and careful observation on the part of the instructor. In addition to keeping pace with the student's development, the instructor must also monitor closely the ongoing growth in the systems and technology available for augmentative communication; new developments produce many opportunities for upgrading the communication capabilities of the nonspeaking person.

1. Technique

Information needed before the technique is selected is obtained through a cognitive, physical and linguistic assessment of the student, and through matching the technique to the student's capabilities. For the physically disabled, potential Blissymbol user, the assessment of his or her ability to access the symbol set and to interact in an unrestricted manner is critical to future successful communication (Beesley, 1984).

2. Symbol Set

McNaughton and Kates (1980) offer a series of questions that can be used by the instructor in examining alternative systems. These questions have since been re-formulated and summarized, so that they now represent key areas in which information should be sought prior to selecting an augmentative communication system. Instructors should consider the

- historical development and the original purpose of the system;
- general description of the system;
- skills required by the learner / user; that is, cognitive processing capabilities, sensory capabilities, motor capabilities;

- adaptations or accessories available to the system that enable the instructor to teach in a way that compensates for skill limitations of the learner / user;
- effects of the system's structure and strategies upon the cognitive, social and communication development of the learner / user;
- support to the system's usage through instructor training, instructor, user and community publications, system development and communication materials, additional materials and / or accessories that support learning in order to use the system;
- skills required by those with whom the user interacts;
- aids associated with the system that assist listeners in its use, (for example, instruction, speech output, hard copy output);
- effects of the system on those with whom the user interacts;
- the pros and cons of the system for various communication purposes and populations; and
- research results, documentation and extent of the system's usage.

Several other approaches may be used to compare systems. Musselwhite and St. Louis (1982) offer a framework for describing potential systems. Chapman and Miller (1980) classify the various systems according to the cognitive level needed to function with the symbol set. Franklin Silverman (1980) offers yet another structure for describing the many systems. (For references regarding comparisons of the various systems, consult the Bibliography.)

3. Communication / Interaction Behaviour

The component which frequently gets the least attention even though it is critical to the success of the augmentative communication system, is communication / interaction behaviour. We are well aware that as we communicate vocally, we augment our communication with facial expressions, body movements, eye gaze and so on. We have much to learn, however, about the differences between communication in which the main mode is speech and communication that relies primarily upon an augmentative system. Arlene Kraat (1982) discusses the constraints under which an individual using an augmentative communication system must function. Amongst her findings she cites

- reduced rate of communication;
- reduced number of opportunities to communicate;
- limited number of people who are willing to expend the time and effort needed to engage in meaningful conversation;
- an inability to compete in "real conversational time space";
- altered turn-taking behaviour;
- use of unconventional ways of expression for the sake of efficiency;
- difficulty in situations that are time-dependent because of the reduced variety and types of utterances available to nonspeaking persons;
- increased use of multi-modes of communication;

- vocabulary restrictions;
- unique expressive mode;
- inability to use stress, pause and intonation to convey specific intents; and
- use of new expressive modes of communication that change the nature of the interaction.

The instructor must be sensitive to the many differences between speech and augmentative communication, and must prepare the student to interact successfully in the various communication situations in which he or she will be involved. The instructor must help the student to be aware of the listener's needs and appreciate the special demands placed on both user and listener when using an augmentative communication system. It's not surprising that results of the *Blissymbol Evaluation Study*, conducted from 1974 to 1976, (Silverman, McNaughton and Kates, 1978) indicate that one of the best predictors of successful Blissymbol use by an individual is the user's ability to deal effectively with listeners' misunderstandings.

D. Evaluating the Effect of an Augmentative Communication System

In evaluating the effect of the augmentative communication system on the student, the instructor should look not only at the student and those with whom he or she interacts, but also at the effect the system has on communication and the student's behaviour in other areas. The following structure for assessing the impact of an augmentative communication system is adapted from *Communication for the Speechless* (Franklin Silverman, 1979).

In Silverman's view, the system's effectiveness is determined through learning the effect of its use upon the client, the client's family and the instructor. In assessing the system's impact, Silverman evaluates

- the client's communication ability, that is, how appropriate is his or her receptive-expressive communication ability developmentally (a) at given points of time and (b) in given locations;
- the client's speech output and reading ability;
- the client's behaviours other than those directly related to communicative behaviour;
- the client's attitude (a) to communication and (b) to technical aid for communication;
- the client's family's attitude (a) to communication and (b) to technical aid for communication; and
- the instructor's attitude (a) to communication and (b) to technical aid for communication.

E. Focussing on Blissymbolics

Throughout any program planning relating to Blissymbol learning, the instructor must always keep in mind that Blissymbols are being added to the communication skills already acquired by the student. For some students these communication skills are limited because of insufficient opportunity for their development, a non-adaptive environment, severe physical constraints, limited cognitive ability, immaturity and so forth. For other students communication is functional, using previously established systems within special environments; however, these students still require the support of an additional system to be able to broaden their social interactions. Whether Blissymbolics plays a principal or supporting role within the student's total augmentative communication system, it will always be used in conjunction with other modes of communicating. Gestures, facial expressions, vocalizations, technical aids, signing systems and complimentary graphic systems, in various combinations with Blissymbols, allow the student to communicate at his or her highest level.

It's also worthwhile to consider Blissymbolics from the perspective of time. It may serve as a long-term communication system for the student who will never become fluent with traditional orthography or other communication systems, or it may serve as a transitional system to be used during a period in the student's life when it suits his or her capabilities and needs. By giving the student both extensive experience in processing meaningful, sequenced, graphic information and continuous exposure to the written word which always accompanies the symbol on the student's display, Blissymbolics has much to offer as a stepping stone to the use of traditional orthography.

1. Models for Instruction

To clarify further the role that Blissymbols can play for the individual student, three models, which have proven helpful to instructors, have been identified (Silverman, McNaughton and Kates, 1978). These models relate to the language abilities of the user. They describe the way in which the instructional approach adapts to suit the style of Blissymbol use as this use changes, depending on the student's language development.

(a) Model One

Model One (used in the initial application of Blissymbolics, within the Hugh MacMillan Medical Centre (formerly OCCC) program in 1971) presents Blissymbolics as a communication medium that serves as a functional augmentative language. It assumes that the potential symbol user has a fairly well-established native language competence, even though this is restricted to a receptive capability. The symbol user is considered to have reduced language experience rather than impaired language capability.

Blissymbolics is introduced as a functional expressive mode that is

primary or secondary to a person's native language. The symbol user's native language is retained for receiving information from speaking persons. As the population of symbol users grows and as technological developments permit the recording and transmitting of symbol messages, it is possible that Blissymbolics will be available as a mode of receptive as well as expressive communication.

With regard to program objectives, the symbol user should use Blissymbols as the speaking person uses native language. Instruction includes the explanation or demonstration of each symbol's composition and meaning. Numerous symbols, vast number of sentences and varied sentence patterns should be utilized as the symbol user acquires experience with the system and learns new techniques, for example, how to create combined symbols. Program instructors using Model One employ a variety of teaching strategies.

(b) Model Two

Model Two presents Blissymbolics as a communication medium that allows the young child to interact with his or her environment during the early stages of language development. The approach to instruction is based on what is known about normal language learning and the acquisition of augmentative communication systems. Within this model, pictographic symbols are often introduced before Blissymbols. As with Model One, expectations include the usage of a large number of symbols and varied sentence patterns, the creation of new symbols and the generation of sentences. This second model can also be applied to developmentally based language-teaching programs for the trainable retarded. Two examples of such programs are presented by Miller and Yoder (1972) and MacDonald and Blott (1974).

(c) Model Three

Model Three presents Blissymbolics as a medium for providing communication at the surface level. It is applied primarily to individuals in the lower intellectual levels, and assumes limited learning potential and impaired language capability. Model Three calls for a nondevelopmental approach to language intervention. The individual is taught only those language forms and skills that are considered useful in allowing control of and interaction with his or her environment (Gray and Ryan, 1973). Central to this training is a highly structured program that uses imitation and reinforcement techniques. Within this model, a small number of symbols are presented for learning by rote. Sentence patterns are simple and stereotyped.

It is important to recognize that Blissymbolics can be used within all three models; instructors need not restrict their use of Blissymbolics to one type of application. The model first selected should be open to modification in accordance with the ongoing evaluation of symbol performance. Should the initial program prove unsuitable, the versatility of Blissymbolics allows for transition to a more appropriate model.

F. Planning the Instructional Program

When planning the instructional program four levels of instruction need to be considered:

1. The instruction given to the individual symbol user.
2. The classroom or group setting within which the symbol user applies his or her symbol learning.
3. The extended settings in which the symbol user functions, for example, the school or centre where the program is being conducted and the symbol user's residential setting.
4. The community in which the symbol program is located.

As the program is implemented, the instructor must always be sensitive to the effect of the classroom, extended settings and the community on the symbol user, and vice versa. The ongoing program should respond to the changes that occur as the symbol user gains communication skills and begins to use them in new situations.

Figure 13–2 demonstrates those aspects of an instructional program the instructor must keep in mind if the program is to be effective.

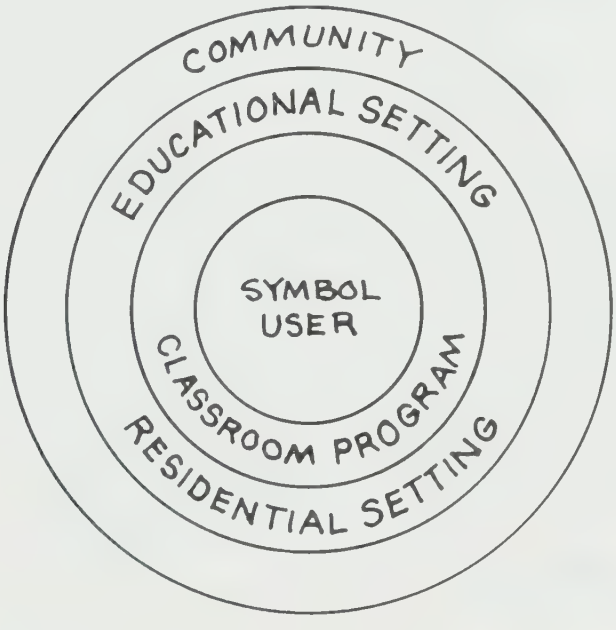


Figure 13–2: Program Levels



Chapter 14 Vocabulary Selection

A. Introduction

Blissymbolics offers numerous possibilities for selecting and organizing symbols. The system's ability to represent both abstract and concrete concepts, the manner in which symbols relate to each other through their common meaning-based parts and the system's potential for combining symbols to represent new concepts, combine to provide many learning opportunities for the symbol user. As the symbol user acquires a Blissymbol vocabulary and gains experience and skill in communicating, he or she can be introduced to new concepts, while those already acquired can be clarified.

Vocabulary selection and display organization are closely related and must always reflect the individual's evolving communication, language and cognitive capabilities and needs. *Vocabulary selection* refers to the process of choosing symbols that are to be made available to the symbol user. *Display organization* refers to the arrangement of these symbols for the individual's optimal use and learning. (More on display organization in Chapter 15.)

B. Program Considerations

Vocabulary selection planning can begin as early as the initial assessment stage. At this time, consideration is given to the potential user's physical, emotional, social, perceptual, cognitive, and language developmental levels and vocabulary objectives. (Symbols selected may relate to concepts and/or words already within the symbol user's receptive repertoire; those being introduced through early visual exposure on the display; or those in the process of being learned.)

Throughout the program, consideration must be given to the Blissymbol user's functional developmental level and to communication and educational program objectives. The prime consideration should be keeping the vocabulary as functional

as possible. Initially, the instructor — with help from those who interact with the user — will choose the symbols, but it is expected that the responsibility for vocabulary selection will increasingly be entrusted to the symbol user. Two approaches to vocabulary selection are possible, one based on the use of an individualized display and the other on the use of a standard display (that is, one that is mass-produced and used by many individuals).

C. Suggested Criteria for Vocabulary Selection

To ensure that the vocabulary selected will be functional, instructors should always keep in mind the following eight basic criteria.

Criterion 1: Consideration of the Individual

(a) Cognitive Level

Considering the individual's level of cognitive functioning helps determine the level at which the individual can interact using Blissymbolics.

The individual's cognitive level will affect the selection of:

- vocabulary needed to express adequately concepts that are relevant and meaningful;
- vocabulary that allows use of Blissymbolics' special capabilities, for example, special symbols, indicators, etc.;
- vocabulary used to provide knowledge of the meaning relationships within the system, for instance, shapes that are frequently repeated (McDonald, 1980).

In addition, considering the user's cognitive level helps determine whether some vocabulary items that can also be expressed in a different manner might be omitted. For example, use of the *opposite meaning* special symbol allows the expression of *down* as the *opposite meaning* to *up.* So, if the symbol for *up* is included in the user's vocabulary, the symbol for *down* may be eliminated.



It's often difficult to evaluate the user's cognitive level before beginning a communication system. As a result, the instructor may have to discover much of the student's capabilities by evaluating his or her usage of the vocabulary items described above.

(b) Experiential History

The person responsible for the initial and continuing development of the symbol display should either be well acquainted with the symbol user, or should learn as much as possible about the symbol user's history and current interests and involvements. This information can come from a variety of sources: the symbol user, family, speech pathologist, ward staff, teachers and so on. To ensure that the vocabulary selected is both meaningful and functional, items chosen should allow the user to express significant events from his or her past as well as current interests.

Criterion 2: Immediate Functional Use

Vocabulary selected for a symbol user's display should have immediate practical use for functional communication. This is especially important for a symbol user with a very limited vocabulary. It's essential that the user be able to see the reason for pursuing symbol communication. Vocabulary selected must also be immediately physically available to the symbol user. Except in special situations, the instructor should not teach vocabulary for eventual use, for example, in anticipation of a technical aid becoming available.

Vocabulary items should help the symbol user's functioning in his or her day-to-day environment. For instance, even though the symbol user may not express great interest in events such as daily therapy sessions, he or she may still need to communicate about these activities.

In addition to immediacy of use, the instructor should take into consideration the user's maturing conceptual understanding, syntax styles, use of the system's structure and skill with numerous communication styles. Symbols that promote such growth — such as the one denoting the imperative sentence style — should be included, although their use will require instructional support.

Criterion 3: Communication Intent

Allowing the individual to express adequately the intent of his or her communication and accommodating growth in this area are further objectives of vocabulary selection. Communication can serve many purposes for the individual.[1]

The intent of communication may be any one or more of the following:

- to give information;
- to receive information;
- to describe an event;
- to persuade a message receiver to do, believe or feel something;
- to express one's intentions, beliefs or feelings;
- to indicate a readiness for further communication;
- to solve problems; and
- to entertain.

(The communicative and noncommunicative functions of language are discussed in depth in Part II.)

Criterion 4: Inclusion of Manners and Greetings

Certain symbols that are socially useful should be considered for an early vocabulary, for example,

hello please thanks



The inclusion of these symbols may serve a very important function for both the symbol user and the message receiver. These symbols provide a more socially acceptable image for the user, who may not have been regarded as a full member of the group because of his or her inadequate social communication. Many message receivers place great emphasis on the so-called social graces, and are much more willing to communicate with an individual who is able to use the appropriate polite vocabulary. You need only consider a child whose spoken language is developing normally in order to realize the truth of this statement. Parents encourage their children, at a very early age, to use words such as *please* and *thank you.* (The ingenious way in which Blissymbols represent these social concepts also provides an excellent introduction to the system for both user and message receiver.)

Criterion 5: Symbol User Involvement

The instructor should encourage requests for vocabulary from the symbol user as well as from other significant individuals — family members, ward personnel and friends — in the user's environment. The instructor should attempt to respond to such requests immediately. If a requested vocabulary item is not readily available among the BCI approved symbols, the instructor may have to combine symbols to achieve the desired result (see Chapter 4, pages 50–51, Chapter 16, pages 123–125.)

Criterion 6: Early Use of Pictographic Symbols

When selecting an initial vocabulary for an individual, the instructor should keep in mind that pictographic symbols have been reported to be those most readily learned and retained. The experience of instructors seems to indicate that pictographic symbols facilitate symbol usage for individuals functioning at lower cognitive levels. The instructor must, of course, consider the pictographic nature of a vocabulary item in relation to the other criteria outlined. For example, *wheelchair*  is a pictographic symbol, but if a wheelchair is an item that is not found within the symbol user's environment, this symbol will not be useful for functional communication. In this case a more appropriate choice may be the symbol for *chair* . In contrast, the symbol for *drink*  is not pictographic, but may need to be introduced early on for functional purposes.

A needed symbol should not be withheld because it's nonpictographic; however, in introducing an early ideographic or arbitrary symbol, the instructor

needs to devise an appropriate explanation to assist the user in recognizing and remembering the symbol. With imagination and planning, nonpictographic symbols can be meaningful to the user in the same manner as pictographic symbols. Many instructors have found it useful to add pictographic features that offer the user personal clues to the meaning of the symbol. It is recommended that these additions to the Blissymbol be done in a colour other than black, so that the Blissymbol remains distinct from the added features.

To allow many instructors to benefit from experiences of successful Blissymbol instructors, *Picture Your Blissymbols* has been developed by the Blissymbolics Communication Institute. This publication provides an easy means for the instructor to introduce illustrated symbols and thus have a fun, colourful way of explaining the symbols.

my, mine



teacher



From *Picture Your Blissymbols,* Toronto, Blissymbolics Communication Institute, 1984.

Criterion 7: Visual Similarities of the System

In order to deal adequately with visual similarities in the Blissymbol system, the instructor must become aware of the symbol user's visual perceptual skills and abilities. The visual similarities found within the system may prove confusing for some users, but be an added learning device for others. For example, for a person with visual perceptual difficulties, simultaneous presentation of the symbols for *happy* ♡↑, *sad* ♡↓ and *upset* ♡↑↓, may prove to be confusing and frustrating. Conversely, for an individual who is able to deal with subtle visual differences and who can conceptualize the underlying logic of symbols, simultaneous introduction of these three symbols may actually aid their acquisition and functional use.

Visual difficulties need not necessarily discourage the instructor from introducing visually similar symbols simultaneously. Often, visual perceptual skills seem to improve through exposure to the Blissymbol system. As an interim measure, symbols that appear to be visually confusing may be introduced with additional discriminative devices. The instructor may physically separate symbols that look alike. For example, the symbol for *happy* ♡↑ may be at the top of the board, while the symbol for *sad* ♡↓ may be at the bottom. Another helpful device is the use of colour as a clue to the critical differences in the symbols. For instance, the arrow tips in *happy* ♡↑, *sad* ♡↓ and *upset* ♡↑↓ may be coloured, or different colours may be added to the borders of symbols that are difficult to differentiate.

Criterion 8: Individualized Versus Standard Displays

In selecting vocabulary the instructor must weigh the relative merits of the totally individualized display and the standard display. A standard display allows for minimal individualization through the addition of a small number of vocabulary items. An individualized display begins with a blank grid to which the instructor affixes symbol stamps selected for a specific person.

Between these two extremes is the selected display, which is created for a specific setting and which serves as a common display for a group of symbol users within an institution, a school district or other similar grouping.

The greatest advantage of the completely individualized display is that, if vocabulary is properly selected, it can be the optimal display for the individual. It allows the instructor to meet the user's communication, physical and cognitive needs both in terms of vocabulary selection and display arrangement.

The greatest advantage of a standard display is that it requires little or no construction time, and provides a common frame of reference for message receivers who interact with a number of users. Initially, the development of a standard display for a particular setting involves a time commitment by the instructor, but once it is constructed, copies of the display can be made for partial or full use by all symbol users. A standard format can be helpful in institutions where there are communities of symbol users.

(a) Use of Standard Displays

The decision to use a standard display should be based on the assumption that a large percentage of the vocabulary on that display is in fact suitable for the individual symbol user. Once this decision has been made, careful consideration should be given to the sequence in which the available vocabulary items are to be presented to the user. Many instructors control the sequence of symbol presentation by masking those parts of the display that are not yet being used by the symbol user. Another approach is to leave the whole display in view and highlight (by colouring or outlining) those symbols that are already being used. Most standard displays allow some room for individualization, either within the display area itself, or through the use of additional symbol spaces or auxiliary displays. The instructor who chooses to use a standard display may eventually find it necessary to move to a larger standard display or to an individualized display.

(b) Personalized Items on a Display

It's important that an individual's display, even if it is a standard one, reflect personal interests. This can be accomplished by including in an individualized display — or adding to a standard display — pictures and/or photographs that reflect the user's favourite discussion topics, people and so on. (It is, of course, essential to include the symbol user's name on his or her display!) In addition to giving the user a sense of possession of the display, this practice may result in more intimate communication.

(c) Incorporating Items from Other Symbol Sets

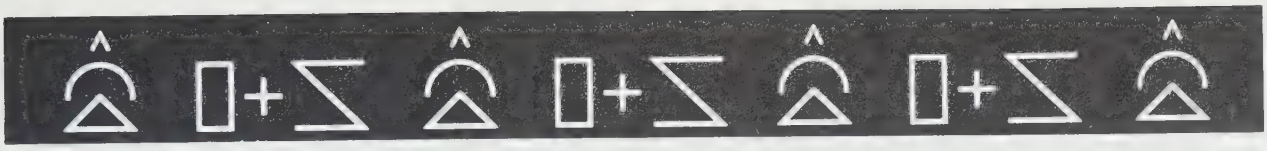
The instructor should always be open to other potentially useful systems as adjuncts to Blissymbols. There are several situations in which communication can be enhanced by the parallel use of Blissymbols and other graphic symbol systems.

- The individual learning to communicate may be unable to deal with the level of abstraction presented by some Blissymbols. In this case, the instructor should consider supplementing the Blissymbol display with other symbol sets, such as pictures, line drawings or rebuses.
- The symbol user with a functional Blissymbol vocabulary may regularly require certain items on his or her display that are difficult or cumbersome to denote using the original 1400 symbols in *Blissymbols for Use*. If specific items such as animals or foods are required, the instructor can refer to Blissymbols from the BCI Supplements (information available from BCI). If an even more concrete representation is required, pictures or rebuses can be added.
- Some Blissymbol users may also be learning traditional orthography. In these cases, the inclusion of some items presented in traditional orthographic form may aid in the transition from one mode to the other and may be extremely motivating to the symbol user. Initial consonants used with the Blissymbol classifying symbol can be beneficial to the young symbol user who is beginning to read words. For example  *animal* b can be used for bear.

The instructor should always be flexible and ready to meet the particular vocabulary requirements of each individual through the thoughtful use of complementary systems.

NOTES

1. See Rees in *Bases of Language Intervention* Schiefelbusch (Ed.), Baltimore: University Park Press, 1978.



Chapter 15 Display Organization

Display organization is the process of arranging the symbols for optimal use by the Blissymbol user. In order to arrange the display properly, both the system and the user must be considered.

A. Planning the Display

1. The Blissymbols

When planning the display the instructor must pay attention to the visual aspects of each symbol, that is, its size and colour, and to the positioning and arrangement of each symbol with respect to others on the display, for example, meaning groupings, figure-ground relationships, and intersymbol spacing.

2. The Blissymbol User

As we have already discussed, the instructor must consider the user's physical, emotional, social, perceptual, cognitive and language developmental levels when planning the display.

B. Suggestions for Display Organization

1. Consider the User's Physical Restrictions

The physical capabilities and limitations of the individual user determine the areas of the display which are accessible to him or her. A thorough physical assessment can provide guidance in this area.[1]

The physical assessment should examine the individual's range of movement

and targeting accuracy; the size of the display required for optimal use; the possibility of a portable display for mobile individuals; the feasibility of a number of different displays to accommodate the physical constraints of the user in various situations; and the possibility of incorporating auxiliary displays to provide the user with an expanded vocabulary.

In evaluating the user's ability to target, the instructor must determine both the size of the symbol space and the space required between symbols. Depending on the user's position relative to the display, he or she may be able to deal with different-sized stimuli.[2] For example, a six-inch symbol space may be required when the user's arm is extended, whereas a one-inch symbol space can be targeted when the arm is flexed. In order to accommodate the requirement for uniformity of symbol size, the background target area can be expanded while the symbol size remains constant. For instance, the symbols located at the level of arm extension could be one inch in size mounted on a six-inch background, while those located where the arm is flexed could be one inch in size but located right beside each other.

Should the physical capabilities of the user change, the display must be adjusted accordingly.

2. Be Creative and Flexible

Remember, the Blissymbol display need not be restricted to a rectangular lap tray mounted on a wheelchair. Consider the needs of the user and construct displays best suited to him or her. This could involve using displays of varying shapes, various construction materials, alternate colouring systems, various portions and so on.

3. Consider Language Expectations

The instructor should consider the primary model or models of syntax to be used by the individual (see Chapter 9). This will affect the symbol arrangement. The three following arrangements, or design models, encourage left-to-right sequencing of symbol utterances.

(a) The English Model

The *Fitzgerald Key* was originally designed to teach deaf children to sequence sentences according to traditional spoken English word order. It can be helpful as a framework for display construction for individuals who will eventually follow a predominantly English word pattern. Basically, symbols are organized in linear columns as follows:

PEOPLE	*VERBS*	*PREPOSITIONS ARTICLES CONJUNC-TIONS*	*ADJECTIVES ADVERBS*	*THINGS OBJECTS*	*PLACES*	*TIMES*	*SOCIAL AMENITIES*

(b) The Bliss Model

Use of Bliss' syntax model, which includes an expanded sentence order, can provide an underlying structure for organizing a display. Here is Bliss' expanded sentence symbol order.



This might guide the ordering of a display as follows:

PLACES	*TIMES*	*PEOPLE*	*VERBS*	*THINGS OBJECTS*	*ADJECTIVES ADVERBS*

(c) The Development Model

Information from normal early language development can be helpful in teaching and using Blissymbols.[3] Following early language models, symbol sequences would build from one to two to three symbol utterances. This suggests the following display arrangement:

Agent **Action** **Object**

Individual syntax objectives should be clearly defined before organizing a display.

Regardless of the model used, the instructor should consider the way the student remembers symbol groupings. Displays can be arranged according to semantic groupings in a manner that gives unique shapes to the symbol clusters, for example, people could be arranged in a vertical column; prepositions could be a small square; verbs could be a large horizontal block, etc.

4. Physical and Technical Functional Requirements

The instructor should consider the eventual (or immediate) display organization that will allow indirect access to symbols. This could involve grouping the symbols and allowing them to be accessed through an encoding system, as with the use of a fist to access groups of symbols. Having indicated the appropriate group of symbols, the user can then indicate the specific symbol by pointing again to a second code.[4]

Other types of display organization are determined by the use of eyes for pointing or for coding. Further information regarding this type of display is presented in McDonald (1981) and "Eye Pointing: An Alternative Mode of Response" by Pat Connor (BCI Monograph, 1984).

For severely physically handicapped Blissymbol users, the instructor should consider a display organization that can accommodate the use of a technical aid. Although the aid may not be available immediately, the possibility of its use in the future should influence the organization of early displays. Various "levels" within one location can be used, as can a paging or indexing section, to locate various symbols. For further reading in this area, see Colquhoun et al. (1982).

5. Frequency of Use and Accessing Ease

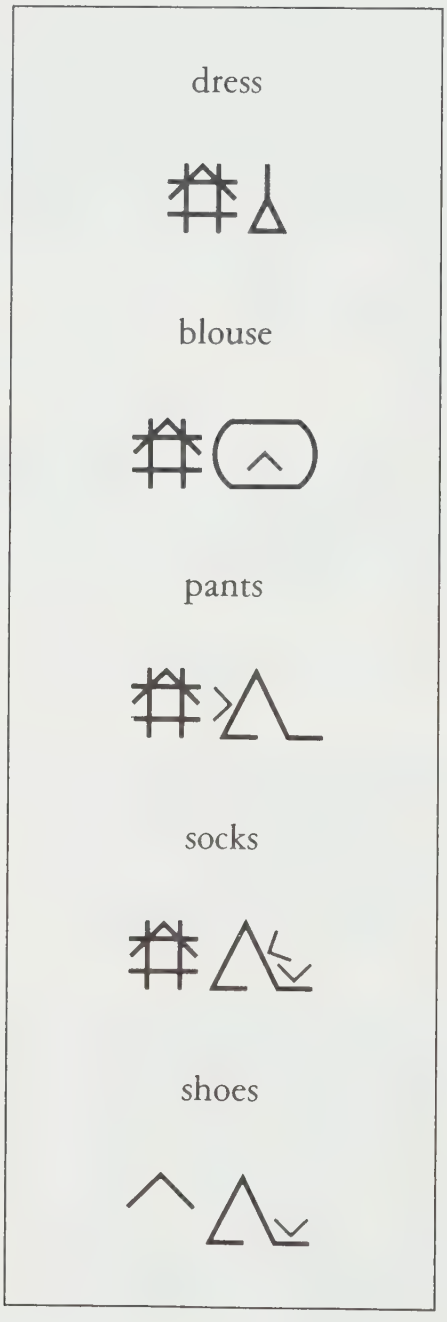
For a symbol user whose ability to access varies as he or she targets different parts of

the display, the instructor should consider placing the most frequently used symbols in locations that are most easily accessed.

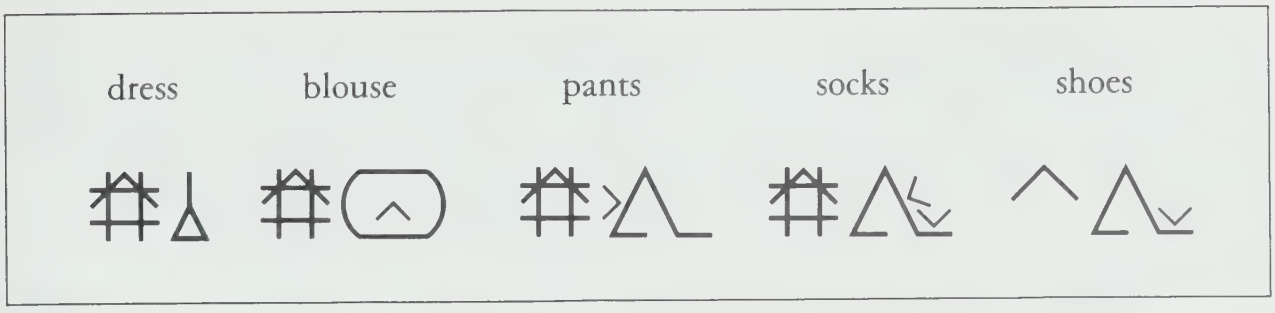
6. Visual Scanning Preference

In grouping symbols, the instructor should examine the user's preference for vertical or horizontal scanning. For example, a grouping such as clothing could be organized as follows:

vertical scanning



horizontal scanning



The final decision should be based on the individual's directional preference in scanning material.

7. Additional Displays

All the symbols used by an individual need not be included in one display. Auxiliary displays can supply vocabulary items used infrequently or in confined contexts. For example, a symbol user may have a *Special Blissymbols* block that deals extensively with food, drink and so on, which is used primarily at meal times. Or an auxiliary book or display may contain symbols used only to discuss certain topics that arise on an irregular basis.

When auxiliary displays are included as part of a symbol user's communication system, the individual must have some means of indicating a wish to use them.

8. Colour Coding

The first decision to be made about colour is whether or not it should be used. Colour on a display may prove to be visually confusing, or it may be regarded as childish by some symbol users. If colour is used, it can be applied in a variety of different ways and for a number of different reasons. Coloured Blissymbol stamps are available in which the different colours are used to indicate grammatical categories.

Further grouping of symbols can be accomplished by mounting the stamps on various coloured backgrounds. Most symbol displays, for example, contain a large number of nouns. (Nouns are denoted by orange symbol stamps.) By semantically regrouping them on a different coloured background, the large noun class can be subdivided into meaningful and more easily located units.

If the instructor decides to use a standard display or black-and-white symbol stamps, colour can be used, either as background or as bordering, to define semantic groupings, grammatical groupings, frequently used symbols, etc. Colour on a display can also be used as an encoding system.[5]

9. Room for Growth

The instructor should always ensure that the display can be expanded or revised.

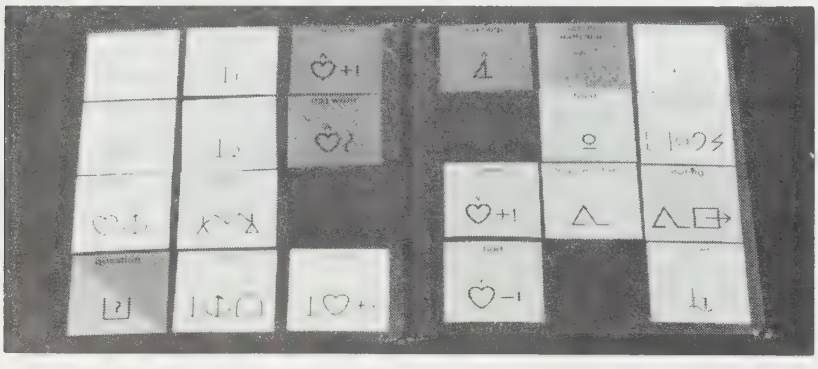
10. The Message Receiver

Consideration must be given to the most frequent message receivers or "listeners." The instructor should make sure that the symbols and words can be seen easily by the receiver. Ensuring this will affect symbol size, word size, tilt on the tray and so on. As well, the *To Help Me Communicate* block should be so placed that it can be seen readily by the message receiver (see Chapter 16, page 121, for further discussion of this topic).

C. Examples of Displays

Here are examples of displays incorporating some of the suggestions just described.[6]

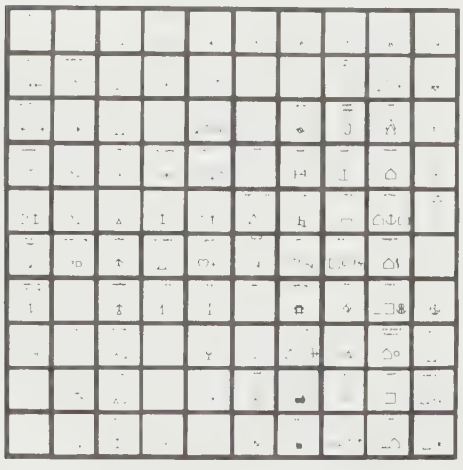
1. An Early Display



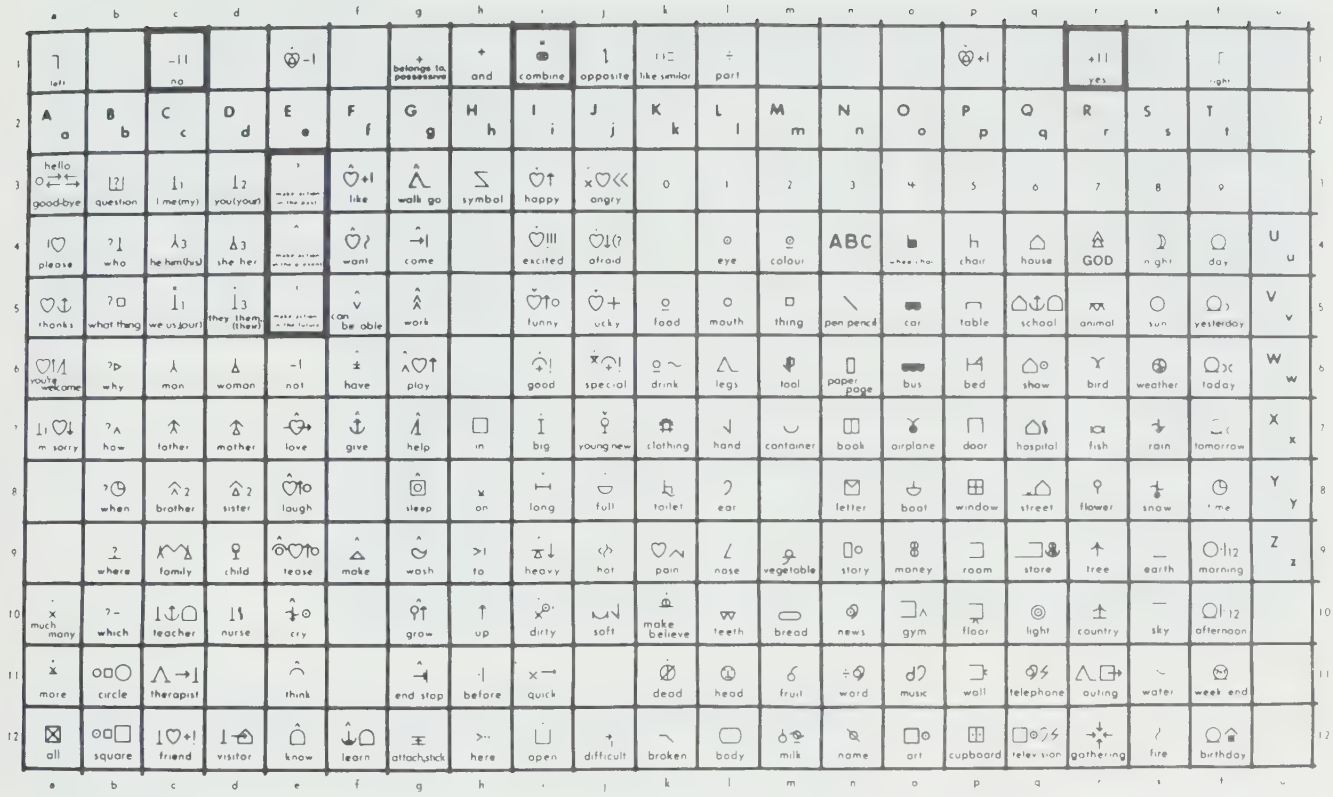
Characteristics

- incorporates only twenty-one symbols
- constructed using flashcards
- folds up, very portable
- uses coloured backgrounds which correspond to grammatical categories

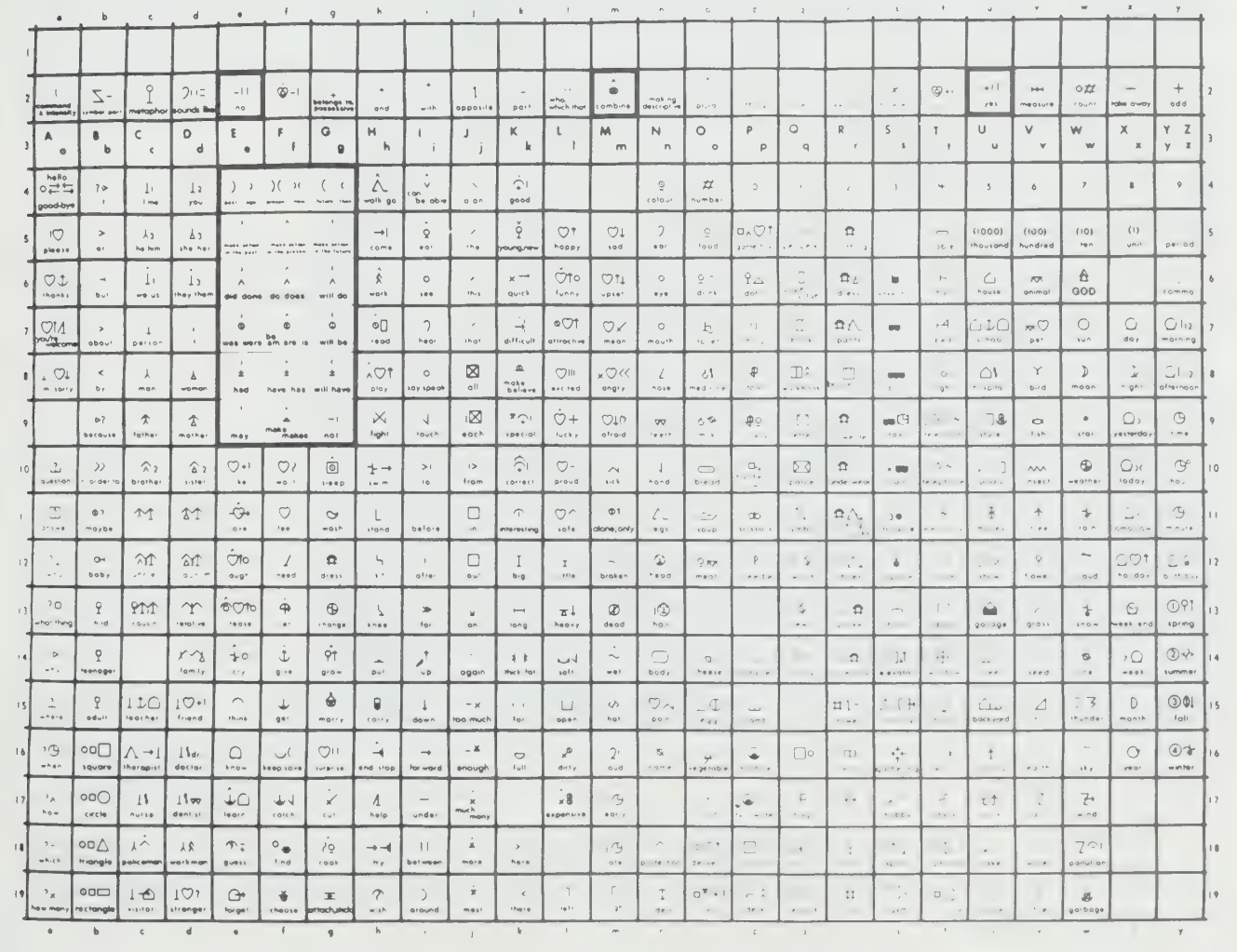
2. BCI 100-Symbol Board



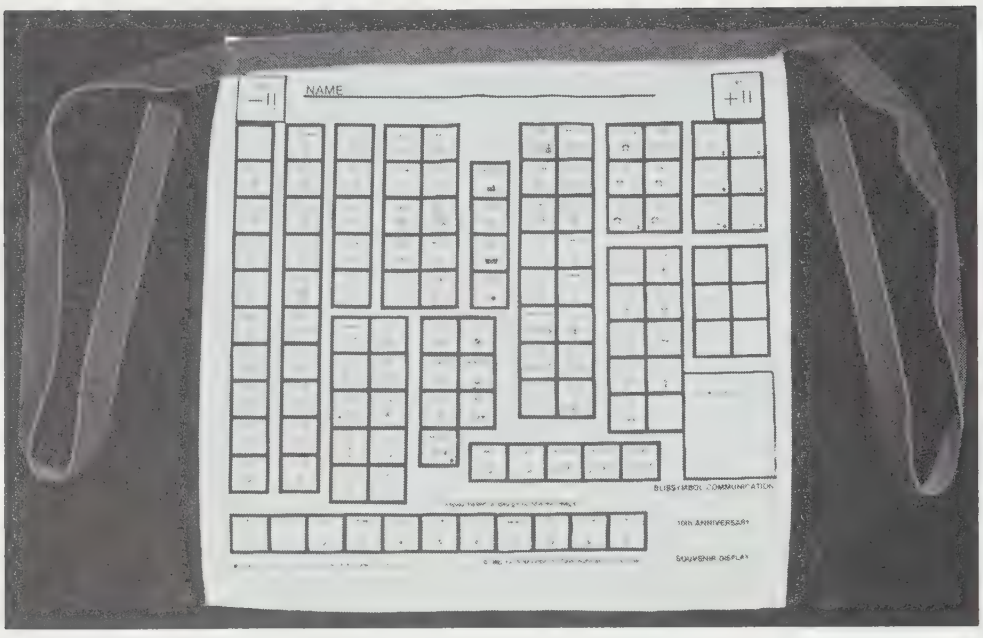
3. BCI 200-Symbol Board



4. BCI 400-Symbol Board



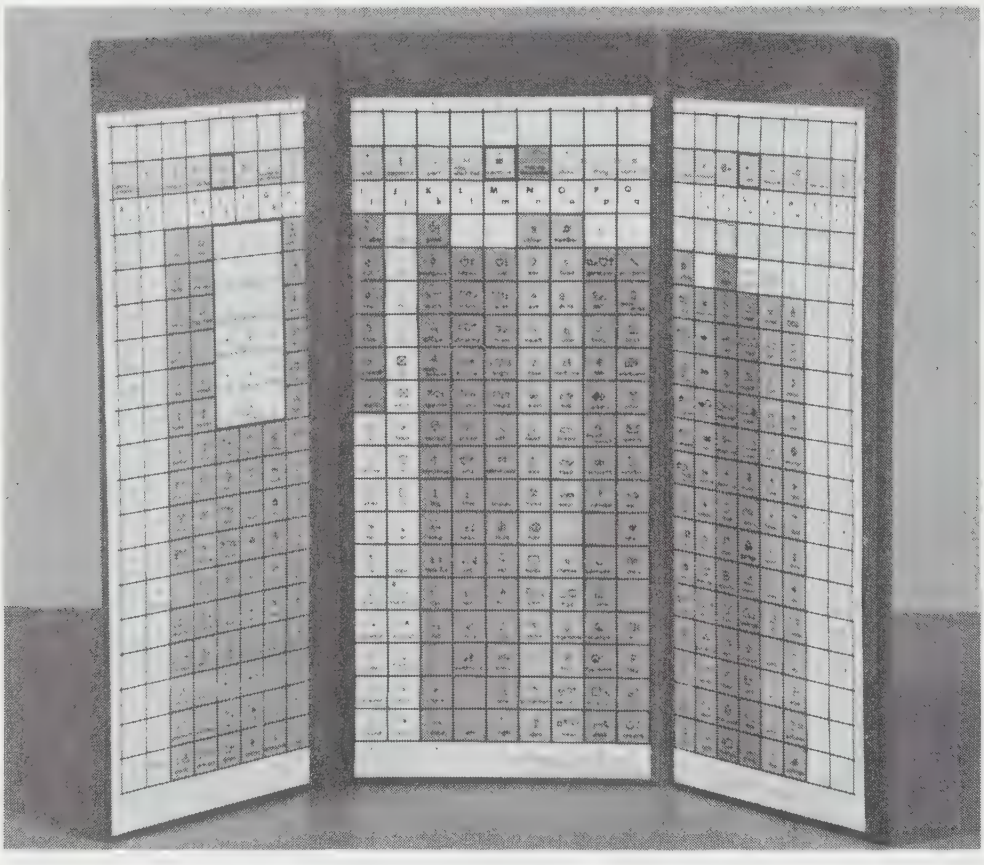
5. Portable Display on Apron



Characteristics

- symbols may be outlined in colour to aid in locating
- printed on cloth

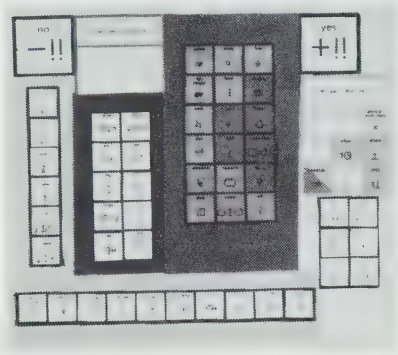
6. Typical Stamp Display



Characteristics

- use of stamps
- coloured according to grammatical categories
- groupings may be arranged on various coloured backgrounds which correspond to semantic categories

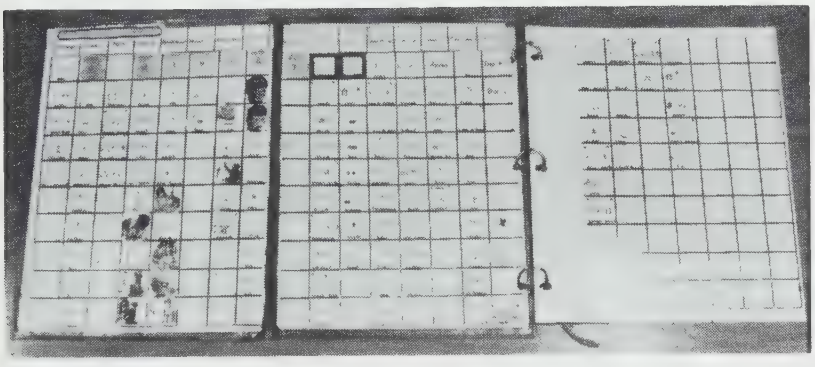
7. Display Formats to Facilitate Finding Symbols



Characteristics

- use of multi-symbols to group symbols in larger semantic categories
- use of coloured blocks, which correspond to the background colours of symbols, to aid in accessing

8. Auxiliary Displays



Characteristics

- may be organized as a foldout leaf
- can be inserted in photo albums or books.

D. Summary

In selecting the vocabulary for inclusion on a display and in determining how to organize the display, the instructor undertakes a serious commitment to the symbol user. Only through a functional and expandable vocabulary can the Blissymbol user achieve maximum growth in communication. And only by using the Blissymbolics system to the maximum extent of personal capability can the user achieve his or her full potential.

NOTES

1. See Beesley (1984); McDonald (1980), pp. 108–10.
2. See Shane (1982), pp. 41-56.
3. See MacDonald and Blott (1974); Schlesinger (1974); Lahey and Bloom (1980); and Brown and Bellugi (1964).
4. See also Vanderheiden (1978); McDonald (1980), pp. 146–48.
5. See Vanderheiden (1978); McDonald (1980), pp. 153–58; Connor (1984).
6. Further examples can be found in McDonald (1980), pp. 149–63.



Chapter 16 Special Blissymbols

A. Introduction

Special Blissymbols are symbols that serve special communication functions. Some Special Blissymbols come directly from the system of Blissymbolics. Others have developed through usage and because they can aid communication for many users, have been included in BCI's presentation of Blissymbolics. Still others may be unique to an individual Blissymbol user. Any symbol that expands the expressiveness of available Blissymbol vocabulary, thereby making the symbol message more precise and clear, can be considered a Special Blissymbol.

The ideas offered in this chapter for teaching Special Blissymbols are appropriate only for symbol users who have demonstrated a desire and an ability to learn these symbols. The instructor must know the capabilities of the symbol user, and introduce those Special Blissymbols that will enhance the individual user's ability to communicate.

B. Teaching Special Blissymbol Usage

1. Introducing Special Blissymbols

Introducing the symbol user to Special Blissymbols helps expand his or her vocabulary and communication ability. The manner in which the Special Blissymbols are used will depend upon the user's ingenuity, confidence and general Blissymbol skill and also upon the individual's ability to tailor his or her communications to fit the knowledge and understanding of message receivers. Before beginning to teach Special Blissymbol usage, the instructor must consider

such factors as the would-be user's present vocabulary size, ability to access the symbols, receptive language level, cognitive level and communication environment.

2. Selecting Special Blissymbols

Whenever possible, Special Blissymbols should be selected *by the user*, in consultation with those with whom he or she communicates regularly. They should be introduced as they are needed to aid communication. If the user is unable to make choices regarding Special Blissymbols, the instructor can introduce them to the Blissymbol display as the user becomes developmentally ready and has need of a special communication function. It is not recommended that Special Blissymbols be incorporated into a user's vocabulary unless he or she can use them for immediate communication.

3. Positioning Special Blissymbols

Grouping the Special Blissymbols in one area of the display highlights their importance to the user and the message receiver. The block called *My Special Blissymbols*, included in BCI stamp booklets, can accommodate eighteen Special Blissymbols. The block can be reduced to an appropriate size before it is placed on the display. The heavy border around the block helps to distinguish the Special Blissymbols from the other symbols on the display. This block should be easily accessible to the user. Accessible Special Blissymbols let the user expand and clarify his or her communication intent. (Examples of *My Special Blissymbols* blocks are given in Appendix 10.)

4. Explaining Special Blissymbols

It is essential to explain the individual's Special Blissymbols to message receivers. To ensure that attention is drawn to this explanation, the *To Help Me Communicate* block is provided in all BCI stamp booklets along with the *My Special Blissymbols* block.

The *To Help Me Communicate* block may be thought of as a letter of introduction to the symbol user, and it is important for the symbol user to be actively involved in selecting its content. The user's name, abilities, for example, hearing and understanding speech, and method of indicating the desired symbol have been suggested by users as important information to include on the *To Help Me Communicate* block. Explanations relating to the use of Special Blissymbols should give message receivers enough information to communicate clearly and enjoyably with the user.

The content of the *To Help Me Communicate* block is intended to assist the message receiver. It need not be accessible to the symbol user, but should be highly visible to the message receiver. (Samples of the *To Help Me Communicate* block are provided in Appendix 10 along with the *My Special Blissymbols* block.)

C. Special Blissymbols

In order to acquaint the instructor with the large number of potential Special Blissymbols available within the system of Blissymbolics, the symbols in this section have been grouped by function under the following broad categories:

- Standard Blissymbols Used as Vocabulary Expanders
- Standard Blissymbols with a Grammatical Function
- Standard Blissymbols Relating to the Sounds and Orthography of Native Language
- Standard Blissymbols Serving a Special Function
- Personal Blissymbols Unique to the Individual

NOTE: The ordering of Special Blissymbols that follows does not relate to the order in which they would be introduced to the user.

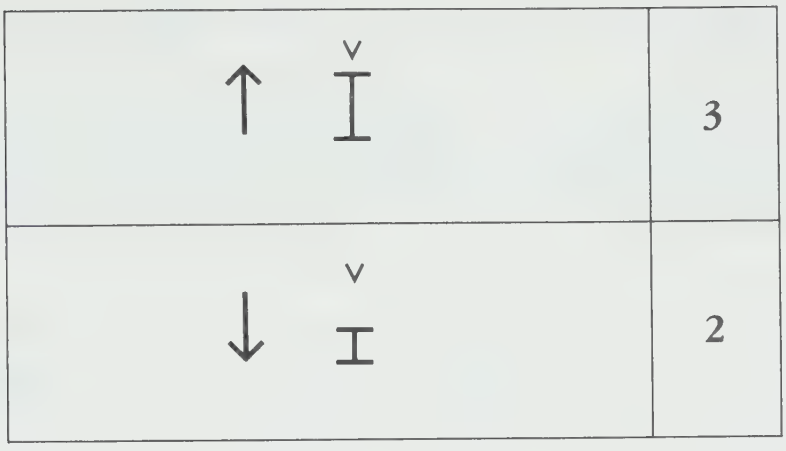
1. Standard Blissymbols Used as Vocabulary Expanders

(a) Opposite Meaning 

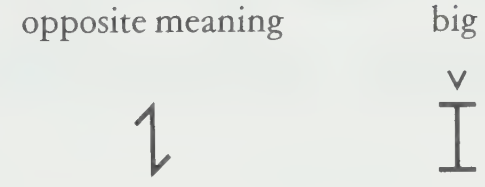
The *opposite meaning* symbol allows the symbol user to create opposite meaning concepts for symbols on his or her display. Before the *opposite meaning* symbol  is taught, the user will likely require symbols representing both of the meanings on the display, for example, *happy*  and *sad* , *big* and *little* , in  and *out* . Sequences such as the following may help to introduce the concept.

After feeling cold water in a bowl, the student was asked, "Is the water hot?" The answer "No" was expanded by the teacher; "That's right! The water is the opposite of hot. The water is cold."

A class of symbol users, ready to be introduced to the *opposite meaning* symbol, were asked to give their opinions and to demonstrate them using arrows pointing up for *yes* and down for *no*. The classroom poll results were written on the blackboard. Opinions were generated from the following types of situations: "Is the item in the box big?"



The results were tallied. Three said *yes, it was big*. Two answered *no*. These two said that it was small. The symbol *opposite meaning* was drawn and the teacher modelled the use of the symbol with *big*.



to create another symbol meaning, *small*.



Several different experiences of this nature were provided; this practice became known as the Opposite Game.

For students who enjoy looking at and working from books, the three-book series *My Two Fat Fish* (Cocking, 1979) provides excellent reinforcement for *opposite meaning* symbol usage.

(b) Combine Indicator

Use of the *combine indicator* affords the symbol user the opportunity to create Blissymbols for concepts not available on his or her display. To create a combined symbol, the user sequences symbols (which are on his or her display) in order to create a concise definition of the new concept. The user alerts the listener to his or her intent to make a new symbol by pointing to the *combine indicator* before the first symbol and after the last symbol in the sequence. Just as quotation marks in traditional orthography signal the speaker's own words, the combine indicator in Blissymbolics signals the user's own creation. The first symbol is usually the classifier, a symbol component that defines what kind of thing the full symbol represents.

In order to assist the instructor and user in structuring their combined

symbols to convey a new meaning, a number of guidelines are recommended:

- Aim for conciseness and transmission of the essential meaning elements.
- Position the combine indicator 1/4 space before and after symbol components.
- In general, position classifiers first.
- In general, modifiers follow the classifier sequentially with the exception of the following modifiers which do precede the classifier: *opposite meaning, part of, like, group of, much, similar to, metaphor, more, most* and *minus*.
- Do not superimpose any component elements.
- Use only one indicator over the classifier, unless more are required for clarification.
- If necessary, use a comma to separate units to clarify meaning.
- Remember, the composition of a combined symbol can vary with the development and cognitive levels of the creator.

The following combined symbols are the product of users of different ages and developmental levels.

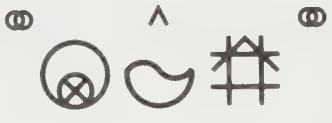
washing machine

Example 1



mother has

Example 2



machine to wash clothes

In the Example 2, ⊗ demonstrates the recommended position of the classifier.

To teach the symbol user the skills required to create new symbols it may be necessary to structure situations.

Combined symbols for concrete things are generally the easiest to create. Present the user with a concrete item, or a picture of a concrete item, of something not on his or her display but with which the user is familiar. Talk about the need to select several symbols in order to explain the meaning of the item. Together, decide on the first symbol. It should tell the "listener" what *kind* of thing you mean. We call this first symbol the classifier. The classifier is then followed by other symbols that describe the

thing being symbolized. The user may need guidance in selecting the most meaningful descriptors (modifiers).

Once the symbol user has learned the technique for creating new symbols in a structured and enjoyable way, he or she should be encouraged to create independently symbols that will enhance communication.

(c) Intensity !

The *intensity* symbol is used to intensify the original meaning of a symbol. While the *intensity* symbol is similar in size and configuration to the *command* symbol, it differs in its placement within a sentence. The *command* symbol is always placed at the beginning of a symbol sentence to signal an imperative sentence. The *intensity* symbol, however, is always placed after the symbol whose meaning is to be altered.

The *intensity* symbol is often translated as *very* or *really*.

Original symbol:

big



Use of the *intensity* symbol:



huge
(very, very big)

The instructor may use comparison pictures to teach the use of the *intensity* symbol, for example:



("This is a) big house."



("This is a) very big house."



("This is a) very, very big house; a really big house, a huge house!"

(d) Similar

The *similar* symbol, literally translated, means *nearly equal*. The use of this symbol tells the message receiver that the symbol user is referring to something similar to that represented by the symbol on the display. The user first points to *similar* and then to the symbol that is close in meaning to the intended concept.

The way in which this symbol is used can tell the message receiver a lot about how the symbol user thinks. It also requires mental alertness and flexibility on the part of the receiver in order to grasp the meaning intended. For example; one user might communicate (*similar* to *sky*) to refer to her *blue* dress.

Another user might communicate (*similar* to *umbrella*) to refer to an awning.

In the first instance, colour is the feature shared by the sky and the user's dress; in the second instance, it is the purpose of the two objects that is similar.

The extent to which a symbol user will include the *similar* symbol within communications will depend upon his or her range of experiences, receptive vocabulary and the interest and enjoyment with which vocabulary-expanding techniques are greeted by the message receiver(s). In order to gain enough confidence to use the *similar* symbol, the user needs to share many meaning-solving situations with imaginative and empathetic message receivers. The instructor can help by providing frequent examples of vocabulary-expanding symbols in his or her communication and by welcoming their use by students. There are many opportunities to demonstrate the extended meanings for symbols on the user's display.

The symbol for *happy*, for example, has many similar meanings. The instructor can alert the student to these synonyms by using them in conversations with him or her and modelling them appropriately for the user.

Symbol user's message:



Mother is happy (she's) coming to school.

Teacher's response:



("You are telling me your) mother is glad *(she's) coming to school."*

or

"She is delighted *she's coming to school."*

or

"She is pleased *she's coming to school.*

"Have I found the correct word yet?"

Keep on trying other words until the right one is discovered.

(e) Part of ÷

For symbol users who understand the use of the mathematical symbol for division, the *part of* symbol is easy to learn. Division breaks a whole into parts. The *part of* symbol breaks a whole concept into parts.

The user unfamiliar with the mathematical operation of division may need to be introduced first to the concept of *part*. The instructor can begin by incorporating the word "part" into day-to-day communication. For example, dessert can be *part* of lunch, chapters can be *parts* of a book, items of clothing can be *parts*, and so forth. By using pictures or concrete items, parts of a house, a shoe, or a car can also be discussed.

The instructor should plan different ways of modelling the use of the symbol and many opportunities for the user to communicate using the *part of* symbol. (Use the symbol itself to demonstrate a big dot being divided into parts.)



A piece of candy or cheese being cut with a knife into two parts can add immensely to the presentation of the symbol. Of course, each new part can be divided into two until every student has a snack.

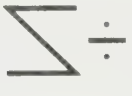
The Part-Of Game may be motivational and challenging for a group of symbol users. A box containing "parts of" items (such as a shoe lace, a cookie or a book cover) is moved from one player to the next. Each student in turn selects one item. Each student points to the *part of* symbol, then selects the appropriate symbol from his or her display.

For example:

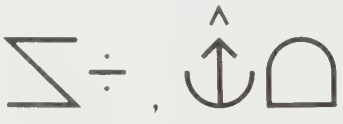


A shoe lace is a part of *shoe.*

To ensure effective communication with unfamiliar message receivers, an explanation plus an example of the use of the *part of* symbol should be included in the *To Help Me Communicate* block.

(f) Blissymbol Part 

The *Blissymbol part* symbol allows a user to communicate a meaning that is not represented by an independent symbol on his or her vocabulary display, but which can be found (represented by a symbol component) within a compound symbol on the display, for example:



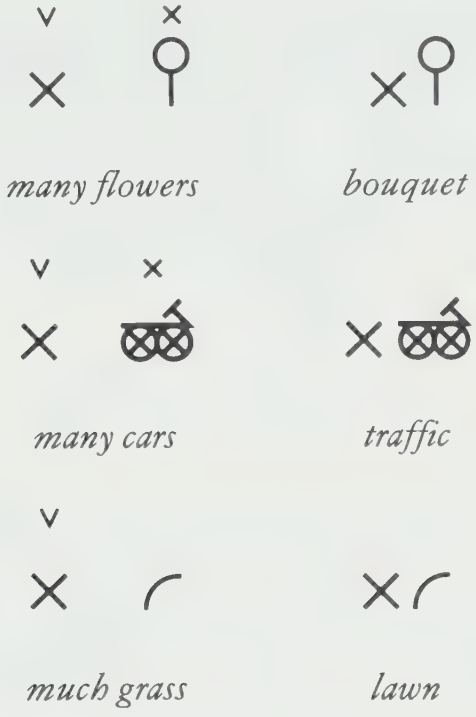
Blissymbol part (to) teach

By using the *Blissymbol part* symbol, *(to) give*  or *knowledge*  can be isolated from the compound symbol *(to) teach*.

Use of this symbol is limited to those users who are familiar with the component parts of compound symbols. It is not a functional Special Blissymbol for communicating with message receivers who are not fluent in the symbol system. If it is decided to incorporate the symbol in the *My Special Blissymbols* block for communication with proficient message receivers, a brief reminder of its use in the *To Help Me Communicate* block is all that is needed. (The user should learn to be selective about the message receivers with whom to use the *Blissymbol part* symbol.)

(g) Group of

Before using the *group of* symbol, the user must be familiar with the symbol for *much / many*. The step from *many* or *much* to a collective meaning is a small but important one.



The instructor should draw the user's attention to the new meaning created when the symbols are brought close together and the indicators are removed. Rather than being used spontaneously in communication, this special capability of the system will most likely be used to add vocabulary items to a symbol display. If, however, this symbol is frequently desired by the user, an explanation and an example should be placed in the *To Help Me Communicate* block.

(h) Generalization 

The origin and use of the *generalization* symbol is discussed in Chapter 4, pp. 45-46. Employment of this symbol is largely restricted to the most advanced symbol users. For these individuals — and their instructors — discovering and experimenting with the *generalization* symbol's vast number of applications can be interesting, exciting and enlightening.

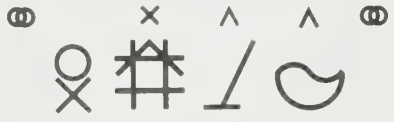
When introducing the *generalization* symbol to students, it may be helpful to reinforce its component parts of the *mouth* and *much, many* by saying, "What the mouth says about many things that are thought of together." An explanation of this symbol could go like this:

"When we use the word *furniture*, what are the many things about which we speak?" . . . "Right, we are talking about many chairs and tables."



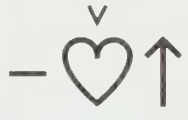
To introduce the use of the *generalization* symbol in combined symbols, the instructor could use examples such as the following:

"Now, if we want to combine a symbol for *laundry*, the many things that we are talking about are clothes that need washing."



(i) Minus, without

The *minus, without* symbol allows a refinement of concepts for sophisticated symbol usage. When related to an original symbol, the *minus* symbol creates new meanings; the English word equivalents sometimes begin with *un, in,* and *dis*. Here is an example.



unhappy

Depending upon the user's receptive language ability, this symbol's use can introduce subtle differences in symbol meanings. For instance, using the *opposite meaning* symbol,

safe



would become



dangerous.

If, however, the student wishes to express the notion that something is not actually dangerous but simply unsafe, using the *minus, without* symbol is much more suitable.



unsafe

(For further information on this symbol's construction and use, see Chapter 4, Features of the System.)

(j) Belongs to +

As well as being used to denote the possessive form of a noun or pronoun, this symbol can be used to help the message receiver arrive at an intended meaning. The *belongs to* symbol's meaning is broadened to include *belongs with* or *associated with*. Here are two examples.



belongs with fish *can be used to arrive at* chips



belongs with eggs *can be used to arrive at* bacon

(k) Pointer > < ^ v

The symbol user who is able either to point precisely or to draw symbols may find the *pointer* symbol a useful Special Blissymbol. Placing the pointer symbol in the *My Special Blissymbols* block necessitates some type of explanation in the *To Help Me Communicate* block. For example:

"When I point to my Special Blissymbol for *pointer*, I need a piece of paper and a pencil. Watch as I draw a symbol and then add the pointer symbol to indicate which part I'm talking about."

The symbol user who is unable to draw his or her own symbols may instruct the listener to draw the symbol and then to question the user as to the appropriate placement of the *pointer*.

A symbol user who can point accurately with a finger can select the *pointer* symbol first and then point to a part of the *Symbol Person* stamp (more on the *Symbol Person* later in this section), thereby indicating that the *pointer* is pointing to a particular area.

When used skillfully, the *pointer* symbol can be more precise than the *part of* symbol; however, for students unable to use the pointer in the above ways, the *part of* symbol can serve the same general function.

(l) Thing Indicator □

The *thing indicator* is used to differentiate between abstract and concrete nouns. It's occasionally used to create a new symbol meaning, and is only required when there are two forms of a noun symbol. The following example demonstrates its proper use.

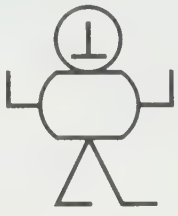


pain: an abstract notion



a painful thing (e.g.; a sore or cut, i.e., something tangible)

The advanced symbol user will enjoy exploring the proper applications of the *thing indicator*.



(m) Symbol Person

The *Symbol Person* stamp is provided in the BCI stamp booklet to expand communication possibilities for the beginning symbol user. By pointing to the desired part on the *Symbol Person,* the user who has not yet been introduced to the symbols representing the various body parts can transmit his or her meaning. The *Symbol Person* stamp can also be helpful in teaching use of the *action indicator*, the *pointer* symbol, the *part of* symbol and the *belongs to* symbol.

2. Standard Blissymbols with a Grammatical Function

These special Blissymbols can be grouped into three categories.

1. Symbols that signal particular sentence types, for example, interrogative sentences, imperative sentences and negative sentences.
2. The relativizer symbol. This symbol performs a grammatical function within the sentence.
3. Those symbols that change the grammatical intent of the original symbol, that is, the *indicator* and *possessive* symbols.

(a) Special Blissymbols That Signal a Particular Sentence Type

(i) Interrogative Sentences. It is appropriate early in a symbol program to introduce a way to ask questions. To do this it may be necessary to stimulate a *need* or desire to ask questions. The following planned experience activity was used to introduce a class of young beginning symbol users to the symbol for *question*. 

A large, creatively decorated box was brought into the classroom. Amidst excitement and enthusiasm, the teacher and children were asked to guess what was in the box. The children, using their displays, pointed to

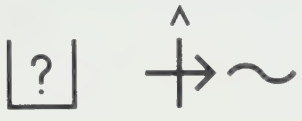
symbols of objects they thought might be in the box. Items such as *animal, car, book* and *food* were suggested. The symbols for these items were drawn on the blackboard. When the list was complete, an open box was drawn beside each symbol to represent the mystery box. As a question mark was drawn in each open box, the teacher said, "What is in the box? Is it an *animal*? Is it a *car*?" and so on. A flashcard of the *question* symbol was placed on each child's display. The teacher modelled each child's suggestion. "You have a question?" (Pointing to the *question* symbol.) "Your question can be about an animal, a car, many things. Ah, your question asks, 'Is it an *animal*?'" After this demonstration by the teacher, each student asked a question.

Planned experiences and teacher modelling will help the beginning symbol user understand the use and value of questioning. Through the individual's use of the *question* symbol, the instructor can discover which of the *who, what, when, where* or *why* questions he or she understands.

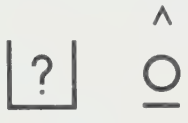
Here is an example of a classroom situation in which the use of *question* symbols was creatively handled by the instructor.

One child in the classroom used the question symbol in the following manner over a one-week period:

question swimming,



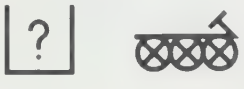
question eating,



question home,



question bus



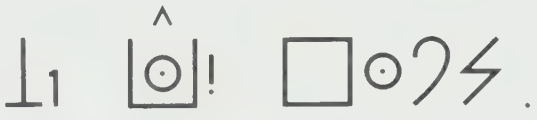
Knowing the child's interests and routines, it was evident that in each case he was asking, "what time?" The next week, when he asked questions relating to time, his questions were verbally rephrased to include "what time?" Shortly after, the symbol for *when* was presented. By carefully observing and documenting his consistent, appropriate use of the question symbol *when*, we learned he had the concept of "what time?"

To expand on their ability to question, the teacher wrote the children's daily news on the blackboard. During sharing time, she encouraged the children to ask questions of each other to find out more information about the news items.

Initial use of questioning may be difficult for the symbol user. Modelling by the teacher and more proficient symbol users is an appropriate way to introduce the five "W" questions.

The following example shows one child's news, followed by the responses of two classmates. The instructor's sensitive questioning led to a valuable learning situation for all the children.

First child's statement:



I watch TV.

Second child's response:



question night

Third child's response:



question home

As a result of the instructor's questions, the second child's response of *night* was clarified to mean *when* ? . The third child's response of *home* was understood to mean *where* ? .

The symbols were drawn on the board and the responses were modelled for the class by the teacher.



When did you watch T.V.?



Where did you watch T.V.?

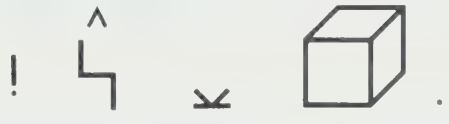
(ii) Imperative Sentences. Young symbol users can be taught the use of the *command* ! and *please* !♡ symbols at an early stage of symbol skill. By requesting *food, drink, story* and so forth, a symbol user learns that communication can be profitable. The user is often equally delighted to discover that symbols give the opportunity to communicate directives to those in his or her environment.

A group of preschool children were introduced to the *command* symbol in order to play a game similar to the popular game Simon Says. The symbol for *command* was explained as follows: the straight line represents a person and the dot shows the mark left when the person stamped a foot to gain attention. The children enjoyed this explanation and were quickly weaned from the stamping of the foot to demonstrate a *command*. This *command* symbol was used in the game to reinforce some spatial relation symbols:

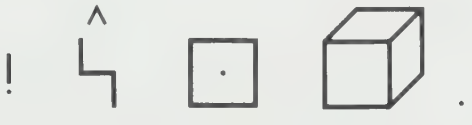
in out before after on



Each user had the chance to be the commander (or leader) and told other classmates how to position themselves in relation to a large cardboard box used as the "gameboard." They delighted in the role of commander and gave instructions such as:



Sit on (the) box. **(directed to the teacher)**



Sit in (the) box. **(directed to a student)**

If the *command* ! symbol was forgotten, the commander had to give up his or her turn.

Please !♡ was introduced for the same game, but was only used in instructions to parents or visitors whom the children did not know well. The group decided to include these people in the game and demonstrated politeness by telling them that the group would *like* (represented by the *heart*) them to do as they were "requested."



Please stand in front of (the) box. **(directed to a visitor)**

Please can be introduced to children when they request a highly desired item such as a *cookie* at snacktime. An appropriate way to teach the symbol for *please* is to model the sequence: say "please" and point to the symbol for *please*, then say the name of the requested item while pointing to the corresponding symbol.

The user's physical ability should be considered by the instructor when requiring the use of the symbol for *please* in symbol messages. If too much time and effort are required to point to this additional symbol, the user should feel comfortable simply pointing to the desired symbol and making eye contact with the message receiver to convey "please."

(iii) Negative Sentences. In teaching the negative sentence, another variation of Simon Says can be used.

In one classroom, a game was devised in which one member of the class was given the *not* symbol. It was larger than all the others on her display and clearly visible to all the other students. This student was asked to describe an activity for one of the other students to role play, either including or not including the *not* symbol in the message. All eyes were upon the display to see if *not* was used.

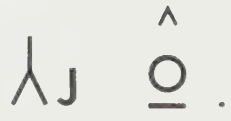
Here are some of the sentences constructed:

1.



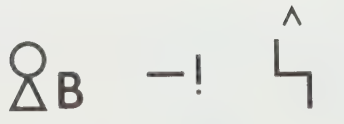
man J not eat

2.



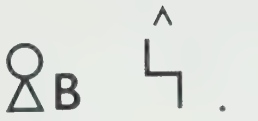
man J eats

3.



girl B not sit

4.



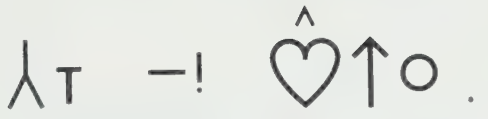
girl B sits

5.



man T laughs

6.



man T not laugh.

The teacher and the students had to scurry to make sure the appropriate action took place immediately after the completion of the sentence.

(b) The *Relativizer* ''

Since use of the *relativizer* symbol is only to be expected in the communication of advanced symbol users, its introduction can usually be withheld until the user can relate to the concept of a list and the ditto marks used to indicate repeated items within a list. The similarity of the *relativizer* symbol to ditto marks provides a way of teaching its use, as the following activity demonstrates.

A baking activity was planned and the full recipe was written on the blackboard. The ingredients required measurements of cups and teaspoons. In reading the recipe from the blackboard, it became apparent that the word *cup* had been used four times sequentially and *teaspoon* three times. Three of the words for cup were replaced by ditto marks. Similarly, ditto marks were used to replace the extra words for teaspoon. Through this exercise, the use of ditto marks was used to explain the concept of the *relativizer* symbol, which refers back to a concept already established.

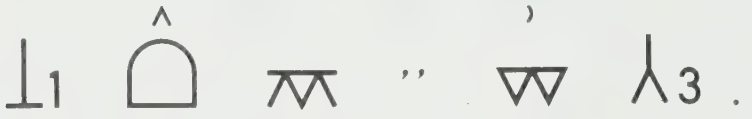
Some symbol sentences were then demonstrated using the *relativizer* symbol. In drawing the *relativizer*, the dot at the top of the comma was enlarged and given a centre; this gave the top of each comma the appearance of an eye. The instructor then emphasized that the eyes were looking back at the symbol just drawn in order to know what to call the *relativizer*. If the eye saw a man, the *relativizer* would be called *who*. If it saw a thing, the relativizer would be called *that*, and so forth.

For example:



I know (the) man who *is talking.*

In this example, the *relativizer* symbol refers to the man already mentioned in the sentence.



I know (the) animal that *bit him.*

In this example, the *relativizer* symbol refers to the animal already mentioned in the sentence.

(c) Special Blissymbols that Change the Grammatical Intent of the Original Symbol

(i) Action Indicator ^ . Knowing how to use the *action indicator* (in addition to being aware of its availability as a separate symbol on a user's display), allows the symbol user to create action symbols from other vocabulary items on his or her display. It's helpful if the user signals the message receiver of his or her intent to create a verb by first selecting the *action indicator* and then pointing to the symbol to be changed to the verb form.

The following game for teaching the *action indicator* has proved successful with many symbol users.

First, the instructor teaches the pictographic body-part symbols: *eye* ⊙, *nose* ∠, *hand* ⅄, *legs and feet* ⅄. These symbols are placed on a small display. The symbol for the *action indicator* ^ is included. As a prop for the game, a large cone-shaped hat, made from newspaper or construction paper, is outlined with the *action indicator*. Initial modelling begins by having the teacher put on the action hat and point first to the *action indicator* and then to a body part symbol.

The teacher then demonstrates the new action symbol and draws it on the blackboard, showing the original symbol "wearing" the action hat. The action hat is then placed on one of the children. With assistance when required, the new player points first to the *action indicator* on the display and then to another symbol. The action symbol created by the player is drawn on the blackboard and the hat moves on to the next child.

(ii) Tense Indicators: Past) *and Future* (. The tense indicators can be introduced to symbol users by showing their relationship to the symbols for *yesterday, today* and *tomorrow*.

yesterday today tomorrow

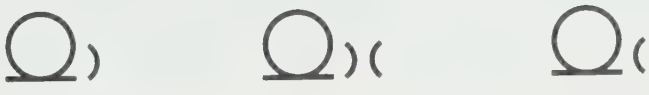


(to) swim (to) eat (to) dance



The instructor can use a calendar of special activities to give the symbol user the opportunity to see the relationship between activities done *yesterday* and activities to be done *tomorrow*. After an appropriate number of specific examples with the calendar, the tense indicator can replace the *action indicator* for past and future events.

yesterday today tomorrow



swam cooks will dance



The symbol user who has learned the skill of "tensing" the verbs may wish to have an explanation of the tense indicators in his or her *To Help Me Communicate* block, thus allowing the use of these Special Blissymbols with a wide range of message receivers.

(iii) Active > *and Passive* < *Indicators.* At the advanced usage level, the *active* and *passive indicators* can be introduced as a pair. A three-dimensional *action indicator*, made from cardboard, will help the instructor to demonstrate the direction of the action.

The instructor can explain how use of the action indicator implies

the active verb form, with the action moving from the subject to the object, or from left to right, as in a sentence.

father helps boy



father helps boy



boy is helped by father



In the passive verb form, the action moves from right to left and the subject is acted upon. Passive sentences can easily be converted to active sentences in communication. As a result, this indicator is not widely used. However, it may be beneficial to introduce it to a proficient user who is moving to traditional orthography so that he or she will have a better understanding of the concept when first encountering the passive form in the native language.

The *active indicator* is useful if the user wishes to emphasize a particular subject acting upon an object. The contrast it provides to the passive can be useful in teaching the direction of the passive. Both the *passive indicator* and the *active indicator* are usually reserved for the sophisticated Blissymbol user who wishes to use all aspects of the system.

(iv) ***Conditional Indicator*** . The *conditional indicator* allows the advanced symbol user to convey the idea of *may* or *might*. It can be useful when the user wants to express doubt as to the certainty of his or her statement, for example:



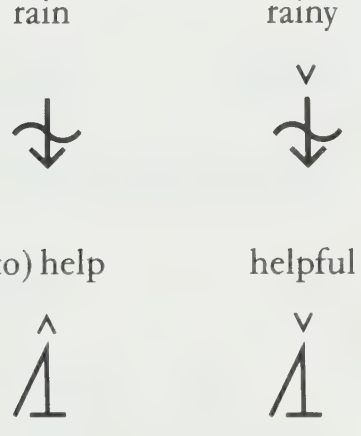
I may have enough money in (the) bank.

In teaching the conditional indicator, the instructor needs to emphasize the question mark which reminds the user of the little question that is always being asked when the *conditional indicator* is used. The *conditional indicator* can be used in a sentence that includes an *if* clause, for example; "I might see him if he arrives soon."

The *conditional indicator* may also be employed with the past and future tense indicators, as demonstrated in Chapter 5, page 61; however, such use of the *conditional indicator* is a system refinement rarely required by Blissymbol users.

(v) ***Plural Indicator*** . The *plural indicator* signals plurality when placed over a noun or pronoun. It is coloured both orange and yellow in the BCI colour-coded stamps as a reminder of its frequent use with things and people. The concept (and symbol) of *more* is generally in the user's vocabulary before the *plural indicator* is introduced. Using the concept of *more* (than one) as an explanation for the *plural indicator* offers one way to teach this symbol's use. Usually the user points to the *plural indicator* and then to the noun or pronoun to give the message receiver the information needed to translate the symbol correctly.

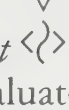
(vi) ***Description (Evaluation) Indicator*** . When placed separately on a user's display, the *description (evaluation) indicator* allows the creation of descriptives from the nouns and verbs on the display.



Most symbol users will have been exposed to the *description (evaluation) indicator* as it appears with standard Blissymbols such as *happy*, *sad*, *big*, *little* and *more*, before they have the knowledge and ability to use this indicator to change original symbols to descriptives. The user's receptive language and understanding of the roles of the three different classifications of symbol groups — nouns, actions and descriptives — will affect his or her

ability to use the *description (evaluation) indicator* in a functional manner.

Props may be beneficial in teaching the *description (evaluation) indicator.* A pointed ice cream cone or dixie cup, with the *description (evaluation) indicator* outlined, is one suitable example. The students can guess which way they think the prop will fall when left to balance on its point.

As noted in Chapter 4, the conical shape is used to designate descriptives because it emphasizes just how shifting and unreliable description and evaluation are. Just as the prop will fall in any of several directions, so people's judgements will differ. Thus there will be great variation in the way people will use *big* , *little* , *hot* , *cold* , *happy* , *sad*  and so on to describe or evaluate people, objects or events. The instructor should explain that the *description (evaluation) indicator* is placed above symbols in order to indicate that the user is making a subjective value judgment.

A further refinement of the system allows the sophisticated Blissymbol user to make an interesting and subtle distinction. By placing a dot before or after the *description (evaluation) indicator,* the descriptive term is modified to imply either potential (as when the dot is placed before the indicator) or, in effect, a *fait accompli* (as when the dot comes after the indicator).

For example:



edible (demonstrating the potential to be eaten)



eaten (demonstrating the quality of having been eaten)



excitable (demonstrating the potential to be excited)



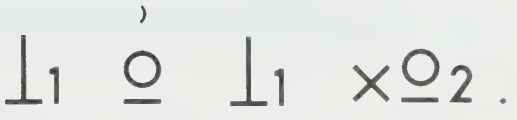
excited (demonstrating the quality of having been excited)

For the sophisticated Blissymbol user, the exploration of this system capability provides stimulating learning experiences.

(vii) Possessive Symbol (belongs to / with) + . Users often imply the possessive form of nouns and pronouns in their sentences, thereby demonstrating a readiness to learn the symbol for *possessive*.



I brother goes swimming.



I ate I lunch.

When asked *"whose* brother" and *"whose* lunch," the response from the user is the symbol for *I/me*.

If the user is able to identify receptively that the statements "I brother goes swimming" and "I eat I lunch" are incorrect, we can introduce the user to the use of the *possessive* symbol + .

The symbol for *possessive* differs only in position from the symbol for *and*. If the user has already been using *and* where two ideas are joined together, the instructor can suggest "joining" in a special way. When the *possessive* symbol is placed "down" beside the first symbol in the sentence "I brother goes swimming," the symbols for *I* ⊥1 and *brother* ^2 are brought more closely together to show that they belong together. Thus the symbol for *my* ⊥1+ is created.

For further experience in moving from *and* to the *possessive,* students can be asked to list many pairs of items joined by *and*:

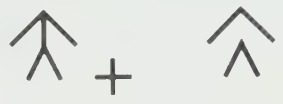


father and son

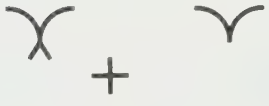


bird and wings

Then, for each pair, the decision about whether one thing belongs to another can be made. When this is the case, the *and* can change position, moving closer to the first item and lowering to the earthline, for example:



father's *son*

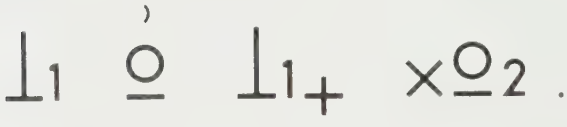


bird's *wings*

Once the possessive has been introduced, the original statements — "Brother goes swimming" and "I ate lunch" — can be expressed as follows:



My brother goes swimming.



I ate my lunch.

A good rule to establish for conversation is that the student should point first to the *possessive symbol.* This prepares the listener to say the possessive form of whichever noun or pronoun follows.

3. Standard Blissymbols Relating to the Expressions, Sounds and Orthography of Native Language

These Special Blissymbols are used to expand meaning when communicating in one's native language. They cannot be used in communication between individuals who have different language backgrounds.

(a) Metaphor 

The *metaphor* symbol is used to alert the listener to the double meaning intended in the symbol message that follows. The concept and use of the

metaphor symbol demonstrate a sophisticated understanding of language. Many symbol users incorporate use of the symbol *(to) joke* in order to signal to the listener humour or metaphorical intent. This use is often more clearly understood by an inexperienced message receiver than is the symbol for *metaphor*.

The sophisticated user who chooses to employ the *metaphor* symbol will need to have it included in his or her *My Special Blissymbols* block. The user may also wish an explanation of its use in the *To Help Me Communicate* block. The user should be taught, however, to deal with receiver misunderstanding by pointing to the symbol for *joke* if the *metaphor* signal is not understood.

One example of the *metaphor* symbol's use is to express: "Let's celebrate."



Metaphor put up the flag

(Other examples of this symbol's use can be found in Chapter 4, pp. 46-47.)

(b) Blissymbols Relating to the Sounds of Native Language

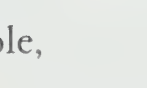
Symbols relating to the sounds of native language words are valuable to children at the pre-reading level. They provide experience in several of the reading readiness skills, for example, identifying words that sound the same at the beginning, sound the same at the end (rhyming words) and sound exactly the same but have different meanings (homonyms).

By using these Special Blissymbols in communication, the user learns to listen for word sounds in words and also focusses the attention of his or her listeners on both word sounds and letter sounds. These experiences can in part substitute for the many rhyming and sound recognition activities that are experienced by the speaking child in nursery school and kindergarten. Three Blissymbols that can be used in this special way are: *similar sound, same sound* and *rhyme.*

(i) Similar Sound  . This symbol is used when pointing to a symbol whose accompanying word *sounds similar* to the word desired

(a) because it begins the same,

similar sound sky

for example,  for *ski*

or (b) because it is similar in rhythm

similar sound telephone

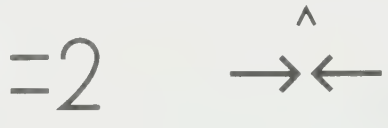
for example,  for *telethon.*

It's important to remember that the intended word should *sound* like the word usually associated with the symbol. The *meaning*, however, will be very different.

(ii) Same Sound  . This symbol is used for words that sound exactly the same, that is, for homonyms.

For example,

same sound (to) meet

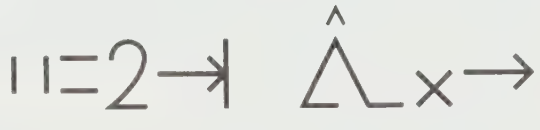
 for *meat*

(iii) Rhyme  . This Special Blissymbol is used for words that rhyme, that is, have similar sounding endings. These can be guessed at from the context of the communication.

rhyme with (to) hate

For example,  for *wait*

rhyme with (to) run

 for *fun*

For students not ready to identify rhyming words, the *similar sound* symbol can be used temporarily to introduce the student to any words which sound somewhat the same in one form or another. At a later stage, the *rhyme* symbol can be added to *My Special Blissymbols* block, giving the symbol user the opportunity to make finer sound distinctions.

For students already involved in a phonics program and able to successfully identify by their sounds words that rhyme, begin the same and sound exactly the same, the symbols for *similar sound,* and *rhyme* can be introduced for use as strategies to expand vocabulary.

(c) Initial Consonants

Students beginning to show an interest in traditional orthography will find using alphabet letters following symbols an invaluable experience in listening and watching for initial letters, for example,



for *cat* or *cow*



for *Toronto*

(d) Spelling

As students become ready to spell frequently used words, the use of spelling can be integrated into Blissymbol messages, for example,



I saw Mary yesterday



I like to talk to her

4. Standard Blissymbols Serving a Special Function

The next two symbols are often used as Special Blissymbols because of the importance of their functions:

danger attention



Both symbols require a short explanation in the *To Help Me Communicate* block so that the listener will be ready with an appropriate response.

5. Personal Blissymbols Unique to the Individual

Any symbol that serves a special function for the user can be included in the *Special Blissymbol* block (see Appendix 11).

Here are some examples of personal symbols and their accompanying explanations.



"When I point to this symbol, I am asking to be taken out of my chair so that I can change my position."



"When I point to this symbol I am saying, I need the symbol for whatever I indicate next. For example, I might point to  then to my ice cream cone."

D. Summary

Special Blissymbols are those which are used by the individual to benefit from the strategies available within Blissymbolics or to apply symbols in ways that are unique to the person. The usage of Special Blissymbols requires an explanation and this should be carefully planned and presented in the *To Help Me Communicate* block. The Blissymbol user should be encouraged to discriminate between those listeners who will respond to Special Blissymbols and those who will not. Users should be sure to direct listeners to the *To Help Me Communicate* block whenever there is a possibility that they will not understand the use of a Special Blissymbol.

Obviously, Special Blissymbols should only be given space on the Blissymbol board if they can be functional to the user. Those generally considered the most useful by a majority of symbol users are the *opposite meaning* symbol and the *combine* symbol. Other Special Blissymbols chosen for inclusion in displays are as varied as the Blissymbol users themselves.

Chapter 17 Symbol Instruction for the Individual Symbol User

A. Initial Considerations

As with the learning of any language, there is no "one way" to approach the learning of Blissymbolics; nevertheless, all approaches share the need to consider the individual, to identify the most appropriate of the three models described earlier, to develop objectives, to decide upon a suitable teaching style and to consider the system.

1. Consider the Individual

The student's complex matrix of communication needs and communication potential; intellectual, physical and academic capabilities; social and emotional needs; motivational and frustration levels; residential, instructional and community situations; and the attitudes of significant others in the student's life all interact to establish a unique situation with regard to the use of Blissymbols. The instructor should be aware of each student's special circumstances. This can be accomplished through consideration of the student's strengths and weaknesses with regard to the following variables:[1]

- the individual's ability to deal with listeners' misunderstanding;
- the number of symbols the individual relates to;
- the individual's interest in communication;
- the individual's interest in creating new symbols;
- the speed at which the individual learns symbols;
- the individual's assessed I.Q.;
- the individual's observed I.Q.;
- the number of symbols in the individual's best sentences;
- the number of symbols in the individual's typical sentences;
- the number of settings within which the individual interacts;

- the individual's alertness;
- the individual's visual problems;
- the individual's auditory attention; and
- the individual's ability to learn auditorily.

2. Identify the Communication Model Most Appropriate to the Individual

As discussed earlier, the instructor must decide which of the following three models best meet the student's needs:

Model 1

Using Blissymbolics as an expressive language augmenting a developed, receptive native language.

Model 2

Using Blissymbolics as an expressive language paralleling and contributing to the development of the user's native language.

Model 3

Using Blissymbolics as a surface communication system.

3. Define Short-Term and Long-Term Objectives; Consider the System

The capabilities of Blissymbolics must be understood and evaluated with regard to the needs of each prospective symbol user. A thorough study of the Blissymbol system, as presented in the BCI *Independent Study Program* or through BCI workshop training, along with a careful reading of Part I of this edition and the system chapters in *Teaching and Using Blissymbolics*, (McDonald, 1980) is essential. For an understanding of the history and background of Blissymbolics, the authors recommend the study of *Semantography* (Bliss, 1965) and *The Book to the Film "Mr. Symbol Man"* (Bliss, 1975).

4. Appropriate Teaching Style

Because symbol instruction is highly individualized, it's important that, from among the team of people associated with the nonspeaking student's program, one instructor be designated as the person responsible for program planning and implementation. Once this has been done, communication procedures should be established with all those who have regular contact with the symbol user. Failure to make these provisions can result in gaps in programming, lack of follow-through and an ineffective instructional program.

B. Some General Program Suggestions[2]

1. Use Blissymbolics to Communicate

Instruction should include learning Blissymbolics and, at the same time, learning how to use symbols to communicate effectively. Students should be provided with immediate communication opportunities in order to use new symbols purposefully.

2. Provide Total Immersion in Blissymbol Communication

If symbol users are to assimilate Blissymbols into their way of relating to their world, total immersion, or as close to this as possible, is necessary. The instructor should arrange for Blissymbol communication to take place with a wide range of people in the student's environment. Symbols should be incorporated in play and learning materials and should be used in every setting in which the symbol user interacts with others.

> **Children learn to speak by being immersed in an environment where speech abounds; similar opportunities should be available to the student learning Blissymbols. Communication should not be a part-time activity.**

3. Remember the Listener

Interaction requires the listener to be involved as the receiver of the symbol communication. The listener's needs can be met by providing him or her with specific information summarizing the way in which the symbol user communicates, by teaching the symbol user how to respond to the different needs of each listener, and by ensuring that general information about Blissymbolics and other augmentative communication systems is readily available to all those with whom the symbol user interacts. The *To Help Me Communicate* block is included with all BCI Blissymbol stamps to assist the instructor to present this information on each Blissymbol display. (Appendix 11 contains an example of a *To Help Me Communicate* block.)

4. Be Creative

Learning occurs best when the instructor informally and spontaneously presents information related to the symbol user's immediate needs and interests. Flexibility and creativity on the part of the instructor are continuing requirements for a successful Blissymbol program.

5. Remember that Communication is the Primary Objective

Games, worksheets, toys and stories are valuable aids to symbol instruction, but they should never become the primary focus of the program. Their role is to supplement

and reinforce Blissymbol learning so that successful symbol communication can be achieved as quickly as possible.

6. Write Symbol Sentences

Since Blissymbolics is not widely used by others in the community, output models are limited. It is important, therefore, to try to expose the student to written symbol statements whenever possible. This gives both the symbol user and the listener experience with entire symbol sequences, and offers the opportunity for review and rehearsal of symbol language patterns.

> **The instructor should find opportunities to write symbol sentences, for example, messages on the blackboard, in writing letters, in school assignments and so on. Communication aids and computer presentation of symbols, either on a computer screen or in printed form, provide another means of helping the student to see symbol utterances.**

C. Specific Suggestions for Pre-Symbol Preparations

1. Be Sure the Symbol User Is Properly Positioned

Appropriate seating and symbol positioning can mean the difference between being able to point to symbols and having to rely on a less direct means of indicating them. Information about this important consideration can be found in Beesley (1984).

2. Don't Postpone Communication while Waiting for a Sophisticated Technical Aid

If an alternative to pointing to symbols is required, use interim procedures such as vocabulary coding systems, gross fist pointing, eye pointing and finger scanning by the listener. At the same time, explore the feasibility of using different methods of control such as electronic aids, electro-mechanical aids, microprocessor communication aids and personal computers.

3. Use the Most Appropriate Introductory Symbol Display

As discussed earlier, there are many considerations to be made in selecting and arranging symbols on a display. The symbol user must either have physical access to all symbols on his or her display or be provided with some other means of indicating the symbols, for example, scanning by the listener, with instructions for this scanning appearing on the display. If the symbol user is mobile, prepare a display that is light, durable, easily carried and convenient. Also, position displays

at strategic places in the user's environment; symbols should be available at all times.

4. Prepare Interesting Teaching Aids

Toys, games, books and worksheets that match the developmental level of the symbol user are essential. Ideas for teaching aids can be found in *Blissymbolics Communication Institute* (1984e), McDonald (1980), Warrick (1982), Owram (1982) and Mann (1979). In addition, the Blissymbolics Communication Institute magazine, *Communicating Together*, offers reports on new teaching aids and techniques.

5. Provide Preliminary Information to Potential Listeners

The symbol user's peers and parents and school and / or institution staff and administrators need preparation so that they will be receptive to the symbol system and the program objectives. The instructor should encourage their involvement and support. *Introducing Blissymbolics* (Owram, 1982) provides an excellent orientation for family and friends.

D. Program Implementation

1. Initial Stage

The initial symbol program usually addresses the following areas:

- visual matching and discrimination of symbols;
- identifying a selected group of basic symbols (In programs for the trainable and severely retarded, attention is directed towards learning and verbally labelling, as well as visually identifying, the symbol.);
- locating symbols within a group arrangement;
- establishing the necessary physical arrangements, including (a) locating the symbols within reach of the user, (b) obtaining proper seating and proper tray arrangement, for example, a tilting tray, (c) providing an alternative if pointing is not possible and (d) providing instructions for the listener;
- developing or expanding the student's motivation to communicate within the classroom, at home and elsewhere by providing successful experiences;
- increasing the student's attention span during communication activities;
- encouraging spontaneous use of the symbols; and
- expanding language comprehension through symbol and nonsymbol strategies.

2. Intermediate Stage

At the intermediate stage, attention is generally directed towards the following areas:

- extending vocabulary;
- simple sequencing of symbols (agent — action — object);
- introducing strategies such as opposite, plural, like, initial consonant (when appropriate for the student) and combine;
- introducing the negative;
- introducing tenses;
- drawing attention to symbol parts, using *Blissymbols for Use* (Hehner (ed.), 1980) as a reference when a detailed explanation is required;
- generalizing to an expanded meaning, rather than limiting oneself to the specific word accompanying the symbol;
- using symbols as a medium for other learning activities;
- emphasizing writing and reading messages in symbols; and
- integrating symbol conversation into many experiences.

3. Advanced Stage

Areas generally covered in the advanced stage include the following:

- varying the style of output to accommodate different levels of skills in the listener, that is, being a good conversationalist;
- mastering the ordering of symbols, more complex sentence structure and a variety of sentence forms;
- expanding the length of symbol utterance;
- using wide vocabulary;
- using advanced symbol strategies such as the relativizer, the exclamation mark for intensity, and the symbol part;
- using the nonsymbol strategy of spelling and continuing the use of the initial consonant;
- expressing complex ideas with symbols;
- story writing;
- using the system creatively;
- relating symbol-reading skills to word reading;
- improving skill in creating symbols; and
- improving questioning.

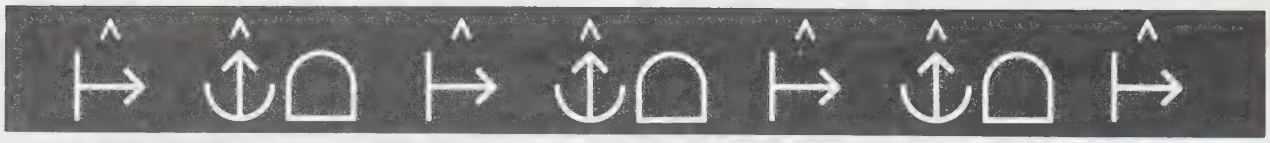
E. The Blissymbol Communication Process

Students move through many levels as they gradually acquire skill in symbol communication. In the initial stages users learn that symbols fulfil the same function as speech and they attach meaning to individual symbols. It is important

that a symbol be used as soon as its meaning is understood and that it become part of a functional vocabulary. Students must develop speed in locating symbols and gradually be taught that each symbol represents a *range* of meaning, not just one word. As students advance, they learn to use the logic of the symbol system, recognizing and using the component parts of the symbols and employing symbol strategies to expand their vocabularies. When students arrive at a level of spontaneous, automatic symbol communication and when they can adapt the style of symbol output to accommodate the varying symbol abilities of listeners, the emphasis in the learning program can be transferred from communication to other areas of academic concentration.

NOTES

1. These variables were found to be (1) predictors of the inexperienced symbol user's eventual skill in using Blissymbols, and (2) ways in which high and low Blissymbol achievers differed. Silverman, Kates and McNaughton (1978).
2. These program suggestions were obtained from research instructors and are directed primarily towards the application of Blissymbolics in Model 1; many of them would also pertain to Models 2 and 3.



Chapter 18 Three Sample Introductory Programs

A. Using Model 1

The following steps should be followed when teaching the use of Blissymbolics as an expressive language to augment a developed, receptive native language.

1. Select two symbols that are of great interest and relevance to the student and that are visually dissimilar. Explain their meanings and composition in a manner appropriate to the student's developmental level.
2. Provide props (such as pictures, objects and experiences) to reinforce and expand the student's comprehension of the symbols' meaning.
3. At the initial stage, each time a symbol is responded to or initiated by the instructor, reinforce the student's learning by pointing to the symbol on the display, saying its meaning, and (whenever possible) writing it as part of a sequence.
4. Plan conversations and activities so that the student will have the opportunity to use the symbols immediately.
5. Arrange for the student to share his or her new symbols with classmates and parents and to have opportunities for continuing use of the symbols. (For instance, the instructor could review the user's activities throughout the school day, review his or her homework activity and send home a note informing the student's parents of the new vocabulary.)
6. Test symbol identification and use the following day. If the student shows that he or she knows the symbols, introduce two or more new symbols and proceed to step 7. If the student does not know the symbols, re-explain, demonstrate again and use them in conversation and activities. Follow the recommendations in steps 2 to 5 and then re-test on the third day. If the symbols are still not known, choose two other symbols and repeat steps 1 to 5. If, after introducing six to eight symbols, the student is unable to identify or appropriately use any of the symbols, review the assessment findings and reconsider the model being used.
7. Proceed to gradually expand the student's vocabulary, always planning oppor-

tunities for regular use of all symbols on the display and for communication with a variety of persons.
8. As the number of symbols available to the student grows, plan exercises to increase the user's speed in locating symbols.
9. Provide activities that increase the amount of time the student is involved in communication and that encourage spontaneous utterances initiated by the student.
10. Continue to expand the experiences of the symbol user so that he or she will have a growing number of opportunities to utilize communication skills and to receive feedback on how appropriate (or inappropriate) his or her symbol usage is.
11. Always encourage creative and spontaneous use of the symbols.
12. Gradually introduce symbol strategies (see Chapter 16, page 120 and Chapter 4, page 43) and a structure for sequencing the symbols (see Chapter 9, page 76.)
13. Work toward sophisticated, comprehensive use of the system.

B. Using Model 2

Instructors will find the following steps useful when teaching the use of Blissymbolics as an expressive language paralleling and contributing to the development of native language.

1. Consider symbol instruction or symbol readiness activities as part of a dual treatment approach. Symbol instruction may begin while activities directed towards improved speech also continue.
2. Emphasize the total developmental needs of the user. Make the program appropriate to the user's social and cognitive growth.
3. Incorporate symbols in all phases of the program. Relate symbols to themes, objects and experiences; associate symbols with toys, songs, snacktime, stories and play activities.
4. Provide opportunities for imaginative and representational play where one object or activity stands for another. For example: "Let's pretend this old hat is a crown and you are the King" or "Let's use these sticks and this bowl and pretend we are washing the dishes". Puppets and miniature objects provide many opportunities for creative play.
5. Introduce symbols as the need arises, spontaneously and within a situational context.
6. Provide symbols for functional communication regardless of the level of the symbol expression. Accept utterances containing only one symbol.
7. Concentrate on the building of vocabulary and the widening of concepts.
8. Do not attempt to teach syntax directly; instead, provide oral and visual methods (symbol messages, stories, sequencing games) that enable the student to acquire syntax rules indirectly. Assist those who communicate with the student to present models consistent with the language developmental level of the student. The symbol model used by the listener should be at the level that

the student will move to next (Miller and Yoder, 1974, Lahey and Bloom, 1980). As the user's experience expands his or her perceptual-cognitive awareness of objects and events and becomes ready to express ideas more fully and explicitly, look for development in the length and format of the user's sentences.

9. Encourage the symbol user to interact with speaking peers both in the classroom and through planned integration experiences.
10. Choose personalized pictures, any one of a number of picture sets, or *Picture Your Blissymbols* (BCI, 1984) when working with the young child, depending upon the interest and learning needs of the student.
11. Help the user feel that his or her symbols are something special that belong to the user.
12. Include the user's parents in the program from the beginning. Reassure them that symbol communication will not discourage speech (see Appendix 6, Table 2) and assist them to relax and enjoy symbol conversation and symbol games with their child. Teach the parents the logic and structures of Blissymbolics and try to help them develop a positive attitude toward symbols as an augmentative communication system.
13. Provide the symbol user with opportunities to engage in the social interactions that normally arise for speaking children.
14. Use the techniques from oral language training whenever they are applicable to symbol instruction.
15. If Model 2 is being used with preschoolers, the instructor should select vocabulary related to pre-school activities such as role-playing games, play partners and make-believe stories (Warrick, 1982). Symbol equivalents for the early word utterances used by speaking preschoolers should also be considered, for example, *more, no, away* and *all gone*.

When Model 2 is applied to the instructional program of the trainable retarded symbol user, many of the above guidelines (such as steps 2 through 15) will naturally still influence the content and process of the program. That said, an instructor teaching this type of student should be aware of the following factors:

- There will likely be a reduced emphasis on facilitating the physiological support for speech.
- Program procedures will be influenced by the degree of structure required by the student, as demonstrated in other instructional situations.
- Vocabulary selection will be influenced by the functional communication requirements related to independence in daily living skills and by vocabulary needs related to functioning at a pre-school level.

C. Using Model 3

The following steps will assist instructors who are teaching students how to use Blissymbolics as a surface communication system.

1. Assess the immediate communication needs of the student and those with whom the student interacts.
2. Establish specific performance objectives that will allow the symbol user to elicit a response from his or her environment, and that will meet the user's specific needs. Asking for a drink, choosing an article of clothing to wear, or expressing a desire to share an activity with a friend are suitable objectives.
3. Analyse the sequence of skills to be acquired by the student in order to arrive at the target behaviour. For example, the sequence of skills in asking for a drink could involve these stages:

 - recognizing thirst;
 - distinguishing between drinks and foods;
 - learning the verbal labels for drinks and foods;
 - learning that drinks quench thirst;
 - distinguishing between the symbol for drink and the symbol for food (This task could be further broken down after analysing the skills required to distinguish between the two symbols);
 - relating the symbol for drink to one drink and the symbol for food to one food;
 - learning the verbal label for the symbol for drink and the symbol for food;
 - learning that through pointing to the symbol for drink, certain persons in the environment will provide that particular drink,
 - learning that the symbol for drink can apply to all drinks;
 - learning to distinguish between different drinks and to specify particular drinks through additional cues such as colour.

4. Implement a program that trains the skills described above in sequence, providing positive reinforcement and sufficient practice and review at each skill level.
5. Work on one skill at a time and always within a meaningful context.
6. Pre-test for knowledge of verbal labels. Be prepared to concentrate on the learning of verbal labels for activities and objects before the learning of symbol-meaning associations.
7. Choose symbols that are pictographic, visually dissimilar, immediately functional and related to concrete objects or individuals present in the immediate environment (see Chapter 14, pp. 107-110 and Chapter 15, page 115, for considerations regarding the addition of colour and supplementary details to the symbols.)
8. Select a target vocabulary that is limited to a small number of symbols.
9. Do not explain component parts; instead, try to relate the symbol configuration visually to the object or person it represents.
10. Begin with programmed activities that focus on:

 - matching symbols, matching a symbol with an object and matching a symbol with a picture;
 - selecting a symbol from a small group of about three symbols (a) with verbal

cues and (b) with pictorial cues;

- selecting a symbol from a large group of about 10 symbols (a) with verbal cues and (b) with pictorial cues; and
- identifying and locating on a symbol display a symbol that is reduced in size.

11. Keep instructions simple and direct, relating the symbol to its visual match, its verbal label and its function. For example,
 - "Show me the one like this." (indicating a visual symbol)
 - "Show me the pencil".
 - "Show me what you write with".
12. Following the acquisition of symbol identification and location skills, introduce activities that require sentence completion and answers to direct questions.
13. Teach, through repeated experiences, that a visual representation (symbol) can serve as a communication signal. For example, each time the student points to the symbol for food, he or she receives another helping.
14. Gradually increase the time spent on symbol-related activities.
15. Parallel the skill development activities to the training of symbols that relate to the student's daily activities.
16. If simple symbol sentences, as opposed to individual symbols, would be more socially acceptable in the symbol user's environment, consider teaching sentence units of two and three symbols, using the procedures already described. For instance, *please — drink, I — need — toilet*. Train one sentence pattern at a time.
17. Rather than expecting the use of symbol strategies to extend the user's vocabulary, try to provide all the symbols required.
18. Plan much repetition and frequent review in order to acquire and retain symbol skills.
19. If the student demonstrates the ability to initiate symbol communication independently or to use symbols in an innovative way, be prepared to transfer promptly to Model 2.

D. Moving Beyond the Initial Stage of the Program

As the instructional program moves beyond the initial stage, the instructor should feel more confident about the suitability of the model selected.

1. Models 1 and 2:

If either Model 1 or Model 2 has been found to be most appropriate, the instructor should now concentrate on increasing the symbol user's knowledge of the symbol system.[1] Worksheets can help the student to learn the system. There are several areas that can be covered with the use of worksheets:

- symbol discrimination: matching, two the same, finding one that is different;
- relating symbols to classifications and concepts;
- matching symbols with meanings portrayed in pictures;
- strategies: opposite, combine, part of, plural; and
- symbol composition: adding a missing part, unscrambling parts, grouping symbols which share a common element.

2. Model 3:

If Model 3 is being used successfully, the instructor may want to consider the total number of symbols to be provided and the number of communication situations for which the student will be prepared. Training towards the achievement of these objectives can then proceed as recommended in the introductory program.

NOTES

1. See Hehner, ed. (1980).



Chapter 19 Using Blissymbols to Enrich all Areas of Learning

Blissymbols can be used in many learning situations. For the pre-school child, they can enhance the enjoyment of toys, stories, games, music, circle time and art activities (Warrick, 1982). For the kindergarten student, symbols can be keyed to themes and outings, such as family, weather, clothing, special holidays, feelings, transportation, season and nature study. For the primary student, symbols can be incorporated in the study of topics such as the calendar, time, and money, and in the general subject areas of geography, mathematics, science, health and reading. For adults, Blissymbols, through their meaning parts, bring a new and different perspective to concepts.

A. Blissymbol Groupings

The second section of *Blissymbols for Use* (Hehner (Ed.), 1980) is organized by symbol groupings that can readily be used by the innovative instructor. How the pictographic Blissymbols represent meaning and how the symbols are related to each other through their common meaning elements can be conveyed to the user by introducing groups of symbols that best illustrate these characteristics. Vocabulary development can be encouraged by exploring groups of related symbols. Of course, as vocabulary is used and understood, language and cognitive growth are helped along.

B. Blissymbolics and the Functions of Language

Blissymbol users have a powerful new medium with which to examine concepts, reason logically and imagine. They are able to refine their self-image and evaluate their world. These cognitive activities enhance development. As well, students are

also able to give information, express intentions and feelings, solve problems, influence their listeners and gain experience in communicating. Through the use of Blissymbols, both the noncommunicative and the communicative functions of language are developed.[1]

C. The Blissymbol Alphabet

The Blissymbol alphabet, as introduced in *Blissymbols for Use* (Hehner (ed.), 1980) provides both student and instructor with a means of ordering Blissymbols, independent of the particular word assigned to the symbol. As noted earlier, this ability to arrange symbols according to their own elements aids cataloguing and the international use of the symbols. Equally important, it provides the Blissymbol user with learning opportunities at both a practical and a conceptual level.

The alphabet's immediate functions include the arranging of symbols on the student's communication display and the ordering of symbols in his or her personal dictionary. For the student not yet ready for the native language alphabet, ordering symbols according to their shapes provides early experiences on which traditional dictionary skills can be built. As the student comes to appreciate the way in which Blissymbols are ordered and then learns about the ordering of traditional orthography, his or her understanding of the structure of language in general is heightened. The student may gain an appreciation of his or her native language and the similarities and differences between it and Blissymbolics.

The following are some general comparisons and contrasts between Blissymbolics and most other written and spoken languages:

- Blissymbolics relies on meaning, in contrast with other languages' reliance on sound / letter associations
- Blissymbolics differs from other languages with regard to grammatical forms: tenses, pluralizing, possessives, etc.
- Blissymbolics has a more concise sentence construction than have other languages.

The Blissymbol alphabet can be introduced to the student in several ways. Here are two enjoyable ways for teaching the symbol alphabet to young students.

- Teach students the Blissymbol alphabet song. (See Appendix 2 for the words and music to the Blissymbolics alphabet song.)
- Create a story using the alphabet stages. (See Appendix 3)
- To give further recognition to the Blissymbol alphabet and help Blissymbol users see attention being given to their system as well as to traditional orthography, Blissymbol alphabet cards[2] can be displayed around the classroom along with regular ABC's.

Symbol users who already know the traditional alphabet, learn the Blissymbol alphabet with the aid of mnemonics. (See Appendix II in *Blissymbols for Use*, Hehner (ed.), 1980).

Whichever approach is chosen, learning the Blissymbol alphabet should be undertaken only if the user considers it interesting and useful, and if the alphabet will in fact provide the user with insights into the principles underlying the structure of Blissymbolics and other languages. Learning the Blissymbol alphabet should come from a desire to know more about the system; learning it should never be a rote exercise. As the user learns the Blissymbol alphabet shapes, he or she is also focussing (in a new way) on the parts from which Blissymbols are created. It is expected that this experience will lead the student to question which shapes have an associated meaning and which are merely a convenience until used in a symbol's construction.

D. Blissymbols and Reading

1. The Language Process

Writing, reading and communicating are integrally related aspects of the language process. All depend on the transmission of meaning. Sanders (1976) describes the aim of communication as the envoking "in others, thoughts or ideas that match those we ourselves have selected." The semantic and conceptual values lie within the person who initiates the communication and within the listener, not within the pattern of information sent or received. In reading, the aim is to match thoughts or ideas with those on the printed page. The success of the process is dependent on the knowledge that the reader brings to the task. As stated in "Becoming a Reader," an Ontario Ministry of Education support document, understanding what has been written "involves more than the ability to decode and translate printed symbols. The reader must become personally involved in thinking through and reflecting upon the ideas presented" (Ontario Ministry of Education, 1976).

Put another way, reading is not merely converting written symbols to sounds, it is a "search for meaning" (Iverson as quoted in Sebesta, 1968). Smith and Goodman, two prominent researchers in the field, emphasize reading as a meaning-getting process. It is their belief that in their "search for meaning" efficient readers must do more than just process the visual information on the page. After all, the amount of visual information on a page of print is staggering — much more than our brain is capable of processing at once. As we read we use our implicit knowledge of the subject matter and the structure of our language. Making use of this nonvisual information as well as the visual information enables us to process and make sense of the visual stimuli.

When an experienced reader encounters an unknown word, three types of strategies are used to help decode and obtain meaning from the printed symbol: (1) the word's position in the sentence (syntax), (2) the possible meanings of the word given the context of the passage (semantics) and (3) sounding out the word (phonics). According to Smith, phonics is used only when necessary as a "last resort," the other two being much more efficient in terms of information processing (Smith, 1982). The following description of a young reader named Carrie demonstrates this process.

When reading, Carrie does not dwell on individual words that are giving her difficulty. She is too impatient for that. She wants to get on with the story and find out what it has to say. Consequently, she uses her strong phonic tools only long enough to give her a clue as to what the words should be in the context, and then she reads on (Bishop, 1978).

There are many specific approaches used to teach reading. They vary in the emphasis they place on the surface visual structure of the graphic symbols and the deeper structure of language — the meaning itself. An eclectic approach is required to meet the individual needs of the students. But given the information available regarding the reading process itself, it is essential that any program of reading instruction encourage and promote the use of all three different types of decoding strategies, and constantly emphasize reading for meaning.

The Language Experience Approach (LEA) has been used very successfully as one component of a beginning reading program (Harker, 1981). In this approach, students are introduced to the reading process through reading stories they create themselves. In this way students learn to read language that is their own. The vocabulary, language patterns and content are based on their personal oral language and their unique set of experiences.

Starting from their own stories, students can accumulate a large number of favourite words and phrases that can be recognized by sight and applied to further writing and reading. The development and extension of such a sight words vocabulary is described by Sylvia Ashton-Warner in her book *Teacher*. The "key word" approach is based on the theory that the first words children learn must be "words organically born from the dynamic life itself . . . words that are already part of the child's being" (Ashton-Warner, 1965). The success of this approach lies not only in children's natural interest in words but also in the selection of words of their own choosing. "These are not dead words of an expert's choosing, but words that live in a child's own experience" (Gibson and Levin, 1975). Writing as a preparation for reading has many examples. The works of Montessori and Sylvia Ashton-Warner provide accounts of youngsters learning to read through writing or typing their own reading materials.

2. Blissymbolics as a Bridge to Reading

Blissymbol communication provides an excellent bridge to reading. The communication process requires the transmission of meaning using symbols created from elements that portray concepts. Like words, Blissymbols are the graphic representations of ideas and concepts. Unlike traditional orthography each Blissymbol is meaning-based, as opposed to an alphabetic code base which is in turn grounded in phonetics.

The Japanese language of Kanji is a logographic language similar to Blissymbols. In Kanji each character represents a meaningful unit. Makita (1968) reports that in cultures where logographics such as Kanji are used, the incidence of reading problems is extremely low — less than 1 percent of the population. By contrast, in North America, where the language is phonetic with an estimated 166 rules for symbol-to-sound correspondences plus numerous exceptions, the

incidence of reading disability is 10 to 20 percent (Gibson and Levin, 1975). There is little doubt that our alphabetic code can present difficulties, especially for beginning readers.

Reading the ideographs of Blissymbols has been demonstrated to be a much easier task than reading traditional orthography (see Appendix 12: the Spence / Bliss Test). When students are either reading words or reading Blissymbols, they are involved in the function of reading in both instances. The nature of the symbols differs but the two activities have much in common. "The process of deriving meaning from Blissymbols parallels the process of deriving meaning from words" (McNaughton, 1972 – 73).

> **By using the ideographic and pictographic Blissymbols, the child is not only developing his expressive language capabilities — he is learning to read. Due to the representational manner in which symbols portray meaning, the child is having his first experience with reading in a symbol mode which makes no letter-sound association demands upon him, thus greatly simplifying his task (Mott, 1973).**

Through symbol use, the student builds a "bank" of Blissymbols that he or she can recognize by sight, in other words, a "sight vocabulary." At the same time, language concepts of sequencing, tensing and multiple meanings are developed. The student also develops the skills of visual discrimination, left-to-right progression, perception and cognition. These skills can then be transferred to the reading of traditional orthography. Blissymbolics thus provides experience in the reading process and offers a bridge to the reading of traditional orthography. Because of this bridge, it follows that children who already use Blissymbolics as their communication medium should have their experience and knowledge of graphic symbol processing reinforced and applied within their reading program. Moreover, consideration should be given to using Blissymbols both as an introduction and a remediation technique for students who have the potential for experiencing difficulty with conventional reading approaches. The use of the Blissymbol language-experience approach offers a new way of introducing reading of traditional orthography. The student can progress from reading symbol sentences and stories to reading a combination of symbols and known alphabetic words, and ultimately to reading words alone. This entire process can be accomplished in meaningful reading and communication situations.

Blissymbolics can also be used very effectively within a reading readiness context. Because of the simplicity of the shape of the symbols, readiness worksheets for reading are easy to prepare.

Instructors can develop activities in the following areas:

- sequencing events of a story;
- sentence completion tasks;
- *yes / no* answering to simple comprehension written symbol questions:
- matching a symbol sentence to a picture;
- finding the required sentence part within a symbol sentence;

- adapting worksheets contained in formal reading programs; and
- reading symbol stories.

When an instructor is teaching Blissymbols beyond the readiness stage, he or she should consider ways in which Blissymbolics, — a visual system based on meaning shape relationships, — *and* traditional orthography, — a visual system based on a sound / letter relationship (see Appendix 12: Spence / Bliss Test) differ, and also the ways in which they can support each other. Through communicating with Blissymbols, the symbol user gains experience in the process of reading and with the acquisition of a sight vocabulary through the incidental learning of the words that accompany the symbols on the student's display. If reading is taught through an approach that emphasizes whole words and whole phrases, and one in which meaning is derived from the context as well as from the individual word, Blissymbolics using a telegraphic or Bliss syntax model can provide valuable "reading" experience. Blissymbols offers a one-to-one symbol-to-word correspondence for direct translation of pre-primers and primers into symbols only when a full English syntax model is used. This model is required when the instructor is teaching reading by moving from word parts to whole words, with the emphasis on decoding.

Several children's books have been written that allow students to read publications containing Blissymbols (Mann, 1979; Cocking, 1979; McNaughton, 1979; la Cour, 1983; Krech, 1980). In addition, many instructors add symbols to favourite children's books. A group of professionals in Hamilton, Ontario, Canada have translated one hundred books for use within their public library, thus providing their community with Blissymbol reading material. There is still a need, of course, for students to see their own stories written in both Blissymbols and traditional orthography.

A Blissymbol language-experience approach has particular merit for non-speaking physically disabled students. Because of the physical limitations, the education and general life experiences of these students are often restricted. As a result, their age, interests and general knowledge are quite different from the nonhandicapped student who is beginning to read. Stories generated by these students themselves will naturally be very appealing and motivating and can become the basis for their total reading and language programs.

NOTES

1. See McNaughton (1982).
2. Blissymbol Alphabet Song and Cards available from BCI.

Chapter 20 The Effect of Outside Influences on the Blissymbol Program

Experience has shown that there are many other causes beside a student's limited capabilities that can have a negative effect on his or her progress. One or more of the following factors have been found to accompany poor Blissymbol performance:

- the instructor fails to provide special programming to support the single Blissymbol user in the instructional setting;
- change in instructor and / or residence;
- electronic equipment and / or seating required but not available;
- no regular instructional program in a chronic care setting or institutional residence;
- the student is bilingual, but his / her second language is not available on the symbol display for symbol communication with his / her family;
- symbols are used infrequently at home because they are not accepted; or the family understands the symbol user's speech better than symbols; or the child refuses to use symbols; and
- a lack of family support and co-operation.

It is necessary that instructors pay attention to all such aspects of the program to ensure that the students' capabilities are fully realized.

A. Classroom Program and Instructional Environment

1. Additional Resources Needed

A new program of augmentative communication places additional demands upon instructors. In taking on such a program, instructors should consider the following four areas in particular:

- Is extra help from either additional staff, volunteers, or parents available?
- Is there access to new instructional aids and materials?
- Are there opportunities for the instructor to attend training sessions and / or obtain instructional materials?
- Is provision made for the sharing of experiences with other instructors involved in augmentative communication programs?

2. Additional Opportunities for Support and Assistance

A number of opportunities for support and assistance that instructors can expect and should encourage include:

- community interest, resulting in increased involvement by volunteers;
- attention and interest of rehabilitation engineers and volunteer technical specialists in the program and the symbol users;
- opportunities to share students' progress through media publicity;
- invitations to speak to community groups; and
- better information to support instructional planning as intellectual assessments are improved due to increased communication capabilities.

3. New Responsibilities

Instructors should also expect a number of additional responsibilities, for example:

- spending additional time on planning and developing new materials and procedures;
- preparing special programs for the Blissymbol user(s) in addition to programs required for other students;
- spending additional time on constructing Blissymbol displays;
- arranging in-service presentations for staff volunteers and students;
- training volunteers;
- instructing parents;
- greeting and talking to many visitors; and
- participating in team programming.

4. Student's Increased Abilities

As the student's ability to communicate improves, the instructor should plan many new learning activities. Blissymbol communication enables the student to interact more with others and to take greater responsibility for behaviour, academic performance, and decision making; it allows the student to be more independent in the classroom. As students become more responsible and independent, it is often possible to reduce the amount of special assistance being given and to integrate them into regular classrooms. As the student's skill in communicating grows, the

academic program can move from one focussed upon learning Blissymbols and how to communicate to one that provides broader educational experiences:

- procedures can be oriented more toward teaching abstract concepts;
- number of rote activities and drill procedures declines;
- number of game-oriented activities increases;
- students assume greater responsibility for problem solving;
- focus on perceptual training decreases;
- degree of flexibility in programming increases;
- degree of group oriented programming increases;
- independent activities increase; and
- there is greater sharing of symbols with speaking students.

5. Instructor's Need for Consultation and Updating

Instructors new to Blissymbolics find it helpful to have consultation and support services available on a continuous basis. The Augmentative Communication Service at the Hugh MacMillan Medical Centre (HMMC) (formerly the Ontario Crippled Children's Centre) is one model of service delivery that has proven beneficial to Blissymbol users throughout the province of Ontario. Blissymbol consultants are available to instructors, and as students' Blissymbol programs continue through the years, updated advice and program evaluations can be sought by instructors as needed.

Instructors without consultant services in their regions will find the growing body of literature on augmentative communication, as well as the various nonspeech conferences and workshops invaluable. This is a rapidly developing area, and one in which the instructor will feel the need for regular updating.

B. The Educational Setting

It's crucial that the Blissymbol program be supported throughout the entire educational setting. The attitudes of those with whom the Blissymbol user interacts have an important effect upon his or her progress. For example, there is more growth in symbol usage when a large number of adults give feedback. Blissymbol students grow in self-esteem and confidence when they see symbols being used throughout the educational setting rather than just in isolation.

Some of the difficulties instructors often encounter as they introduce a new Blissymbol program include:

- resistance by some professionals to accepting symbols as a primary communication system;
- questioning by other professionals about the selection of particular students for symbol instruction;

- resentment on the part of some professionals because of the attention given to the new symbol programs;
- feelings of insecurity among the staff with regard to the new system and their lack of familiarity with it as a communication medium; and
- frequent misplacement by direct care staff of the symbol display and lack of regard for its importance to the user.

Fortunately, there are a number of measures instructors can take to forestall these difficulties. They can

- use discussion, demonstrations, displays and personal interaction to reduce the "fear of the unknown" felt by many of their colleagues;
- provide a better understanding of the importance of an expressive communication system and the role played by augmentative systems;
- explain why Blissymbolics was selected;
- help colleagues to understand the logic and structure of the system;
- help develop in their colleagues an appreciation of how Blissymbolics differs from speech therapy, reading and other communication and symbol systems;
- keep abreast of research data relating to the effect of symbol usage upon speech (Appendix 6 provides data that indicate that there is no detrimental effect on speech as a result of using symbols);
- provide guidance on how to interact comfortably with symbol users;
- encourage others to hold realistic expectations regarding the Blissymbol user's progress;
- foster interest and support on the part of all staff; and
- help others become aware of the cost difference of educating a student without any means of communication and educating a student who becomes semi-independent through the ability to communicate.

Instructors can take a number of steps to increase the awareness of other staff about Blissymbolics and the needs of Blissymbol users, such as

- mounting bulletin board displays;
- editing in-house newsletters;
- organizing special art projects;
- inviting staff and other students for special class activities;
- ensuring symbol labelling of the entire setting;
- showing the films *Mr. Symbol Man, Breakthrough, Now I Can Speak*, and videotapes of Blissymbol programs;
- having symbol students participate in school concerts;
- placing information about the capabilities of the Blissymbolics system on students' symbol displays; and
- scheduling special Blissymbol "information" days.

The Blissymbolics Communication Institute has developed an In-Service

Seminar Kit, which can be purchased by all instructors who have completed BCI Elementary Training. This kit provides audio-visual materials and support information for day-long in-service training sessions which instructors can present to familiarize staff with Blissymbolics.

C. Family Involvement

Family acceptance and encouragement of Blissymbol communication is extremely important. When the family is involved in the use of Blissymbols, the user has the reinforcement and support to use the system beyond the school or institutional setting. It's important that parents become sensitive to the symbol user's growing capabilities, and that the symbol user be given opportunities to take a more active and dominant role in the family and community than may have been possible previously. Parents may need help in changing their attitudes and behaviour patterns to encourage greater independence and decision making in their nonspeaking child. Instructors may find the following ideas useful for stimulating parental involvement:

- Encourage parents to read *Introducing Blissymbolics: A Guide for Parents and Friends* by Leesa Owram (1982).
- Have parents visit the instructional setting for a day.
- Prepare daily notebooks which are then sent home to keep the family abreast of school activities.
- Hold periodic conferences / workshops with parents and those in related disciplines.
- Arrange for parents to meet socially other parents of nonspeaking children.
- Help the family to accept that not everyone understands the child's speech by taping a sample of the child's speech and playing it to the parents.
- Use parent volunteers.
- Establish and maintain telephone contact between teacher and parents.
- Make provisions for symbol translations into parents' first language.
- Take *immediate* action on parental requests for symbols.
- Make home visits.

D. Institutions and Blissymbol Communication

Instructors of symbol users living in institutions, hospitals and residential settings will find the task of gaining program support immense. Shift work, staff turnover, staff reductions, loss and damage of displays and lack of time can all present serious obstacles. Strong administrative support is needed if the program is to succeed.

Then the instructor must find ways to motivate and inform the staff so that they will recognize the importance of communication for the symbol user. Regular in-service sessions, education through films and publications, grateful recognition of staff co-operation, staff involvement and additional support — all are helpful in emphasizing the importance of communication and the need for special attention to this area of the resident's life.

E. Community Awareness of Blissymbolics

Learning a new means of communication involves a widening of one's world. Instructors need to plan ways for symbol users to interact within the broader community and for the community to come to the symbol user. The symbol user should be taken on shopping excursions, trips to neighbouring schools and other community resources and various special outings.

Here are some practical ways of initiating and responding to community interest in the Blissymbol program:

- Give newspaper, radio and television interviews.
- Give talks to service clubs, women's groups, church groups and university students.
- Acquaint educational consultants and administrators with the need for integrated educational settings and community facilities for symbol users.
- Make the classroom accessible to visitors and volunteers.
- Seek funding assistance.
- Generally contribute to an awareness of the Blissymbolics system and the capabilities of symbol users.
- Broaden the community's appreciation and knowledge of all augmentative communication.

Through its quarterly magazine, *Communicating Together*, BCI hopes to assist in maintaining and strengthening community interest in augmentative communication. *Communicating Together* has features for families, service clubs and community groups, as well as Blissymbol users and instructors. As a result, the magazine is a regular source of information for all persons interested in supporting and learning about augmentative communication.



Chapter 21 Special Considerations in Programming for the Severely Disabled

A. Initial Programming

Planning the initial program for an individual whose degree of physical involvement places extreme limitations on his or her independence and experiences challenges the sensitivity, patience and resourcefulness of those involved in assessment and instruction to the maximum. They must be alert to a possibility of a great disparity between the individual's physical functioning capability and his or her intellectual and communication potential. If this incongruity does exist, the instructor must (1) demonstrate this factor objectively in order to justify an instructional program and (2) develop a program that meets the student's intellectual and communication needs despite the difficulties presented by the individual's physical limitations.

Program recommendations based on initial assessment procedures are usually offered very tentatively. In many instances, the instructor will have to decide on the most suitable model for initial programming, using informal evaluations of the student's learning capabilities. The instructor must then rely extensively on an ongoing, diagnostic, instructional program to provide enough information about the student's learning style and potential in order to evaluate the appropriateness of the initial model selected — and, indeed of Blissymbol communication itself, for this individual.

In beginning an instructional program for the severely physically disabled student, it may be necessary to stress to all those who interact with the student the value of communication for the would-be Blissymbol user. If the student's needs have always been anticipated by well-meaning and sensitive parents and teachers, all involved may see no need for the student to expend effort to learn a way of communicating with Blissymbols, or any other system. The student who has been catered to in this way may at first appear passive and lacking in motivation and interest. If this is the case, early instructional goals must focus upon providing opportunities for the Blissymbol user to affect his or her environment through decision making. The instructor should include in the program many situations in which the student can experience positive results from making choices.

The absence of a consistent *yes / no* response cannot be taken as a reliable

indicator of limited potential for decision making. This lack may have arisen because of the extreme physical difficulty of consistently signalling a comprehensible *yes / no* or because the severely disabled person was not given enough opportunities to use or learn this capability.

B. Program Tempo and Style

Where the child is severely involved the instructor must consider the rate of symbol output when planning the student's symbol education. Severely involved children communicating with displays of 200 symbols do so slowly. It is still possible, however, to organize a class routine that will bring symbol communication into constant play. Here is an example of the tempo and style of a program for severely disabled children in a classroom setting.

> Each day, the children begin by working one-on-one with a volunteer who records their statements (or symbol output). In order to know specifically how far each child has progressed in the program, the instructor must have accurate reporting of each child's everchanging output. Severely involved children might have an output of only eight to sixteen symbols over a period of forty-five minutes. It is the volunteer's job to question and probe in order to reconstruct on paper (where the child can see it) his or her ideas. A skilled volunteer does not add to the output, but interprets all of the student's communicative behaviour (including gestures, facial expressions, vocalizations and Blissymbol pointing) to help the student use the most efficient strategies in conveying his or her meaning. The volunteer must know the various techniques, styles, clues, hints, classifications and patterns of English-symbol output being striven for to be able to help the student's communication and to provide relevant documentation for the instructor. Obviously, it is extremely important to invest time in the training of volunteers.
>
> After forty-five minutes of semi-private conversation, the group comes together to share whatever each child wishes to communicate from his or her earlier session with the volunteer. This is a refining process; the second output often allows the child an opportunity to edit his or her news. The child also responds to questions from peers. As coordinator of this group session, the instructor directs the situation so that all students will participate, with the "speaker" assuming responsibility for communicating as effectively as possible. The instructor can ask for more symbols, for fuller sentences and for richer description. The instructor can also guide the group in such a way that the other children are putting their minds and symbol boards to work in a joint effort to accurately "read" the first child's news. In this way, cross-conversations emerge. The timing of this session should be arranged by the instructor to promote productive conversation, while ensuring that time is well spent by all members of the group as the news of each individual is shared and reviewed.[1]

C. Major Program Considerations

There are several essential considerations that must be made in programming for the severely disabled person.

- The instructor should allocate considerable time to each stage of the program. Regardless of the individual's learning capacity, large periods of time are required for sufficient interactions and active involvement by the learner.
- The program should allow the use of more than one type of communication. If the assistance of a technical device is anticipated, the therapy and rehabilitation engineering resources available to the individual should be investigated. The instructor should be familiar with the range of technical communication devices being developed internationally. Arrangements for funding for such devices should be explored from the beginning of the program. However, symbol communication instruction should never be withheld in anticipation of an appropriate technical device. The student should always be provided with an interim, alternative means of using symbols (Connor, 1984).
- The instructor must work with the individual toward the development of strategies and syntax models that promote effective communication with a limited number of Blissymbols and take into consideration the variety of people with whom the individual interacts.
- The instructor must recognize the long-term communication goals of the severely involved person in planning the individual's current instructional program. Too often, insufficient time is devoted to providing training and practice in a particular system before a premature change is made. It can take many years to master an effective communication system, and this fact should be recognized by each instructor who takes responsibility for a portion of the individual's communication training. Consistency and building on past skills must be important programming considerations. The instructor of a severely disabled person must make every effort to find the means of accessing a sufficiently large number of symbols to allow the user to enjoy effective communication.

D. Finding a Means of Accessing

As discussed previously, the first crucial step to providing an individual with good access to symbols is to ensure proper positioning. Without careful attention to the individual's seating and the positioning[2] of the display and controls (when a device is used), the communication program is doomed to failure.

Once the most advantageous positioning of student and equipment has been established, the instructor must then determine the most effective means of accessing the symbols. Many coding systems that are accessed by eye gaze or by fist targeting have been developed (Connor, 1984).

The instructor must then decide which coding system is the most appropriate for the individual, giving consideration to the student's speed of learning, the

number of units that he or she can clearly distinguish and indicate, the individual's familiarity with coding units (colour, shape, number and letter), the organization of symbols for code assignment and the cognitive demands made on both symbol user and message receiver. Arranging the symbols into meaning-based groups — remember to include the user in such decisions — makes the coding system so much more useful. When adequate training is given to the user and clear instructions are provided for the listener, these systems can be very effective. However, they do require the message receiver's presence, often for extensive periods of time.

E. Technical Devices within the Augmentative Communication System

Using technical devices in the individual's augmentative communication system can greatly expand communication opportunities by reducing the time commitment required of the message receiver and by altering the form of the output. Devices that provide memory storage for messages, and screen, hard copy or synthetic speech output allow the Blissymbol user to prepare messages in his or her own time and at the individual's own speed. The user can then present the message to the receiver at a convenient time for the latter, and at an appropriate speed.

The instructor should seriously consider the use of a technical device as part of a communication system for any severely disabled person who is motivated to communicate, who can be trained to operate the device and who has a supportive community within which to use it.

NOTES

1. Barlow (1974).
2. Beesley (1984).

Chapter 22 Technology and Blissymbolics

Since the first application of Blissymbols with physically handicapped children in 1971,[1] technology has played an important part in making the symbols accessible to the user. From the mechanical pointers of the early 1970s to the microprocessor-based devices of the 1980s, tremendous technical advances have been made and applied to augmentative communication.

The Blissymbol user is indeed fortunate that Blissymbols have been incorporated at every stage of technological development in communication. Blissymbols have been used on displays with electro-mechanical pointers, on electronic scanning boards, on overlays for voice synthesizers and in personal computer software programs. As well, many dedicated prototypes displaying Blissymbols have been developed and evaluated. The experience that has been gained over the years provides researchers with essential information for the development of future devices.[2] In addition, instructors have adapted many commercially available communication devices for use with Blissymbols. As more personal computer software becomes available, many more computer techniques will be applicable to Blissymbol communication and instruction.

A. Choosing a Technical Aid

In looking to technology to assist the Blissymbol user, several factors should be considered to ensure that the device is appropriate to the needs and capabilities of the individual.

First, it is essential that the level of technology can be controlled adequately and that the capabilities of the aid are required by the user. Blissymbol communication devices can be viewed as a continuum, beginning with the low-level aids, such as cloth displays and wheelchair trays equipped with stamp displays and extending to the sophisticated personal computer. In addition to allowing the user extensive communication, the personal computer also offers the individual access

to a number of activities: educational opportunities, leisure activities such as games, self-expression through art and music programs, word processing, record keeping and possible vocational training. The cost for devices ranges from $5.00 for the low level aids to $5,000 or more for microprocessor-based aids. The following list shows the range of Blissymbol communication devices:

- Cloth and paper displays to which user points.
- Coded displays.
- Electro-mechanical pointers.
- Scanning devices.
- Scanning devices with memory.
- Microprocessor-based dedicated devices with hard copy; CRT screen or synthetic speech output.
- Personal computers performing many functions in addition to communication.

B. Examining Communication Devices

A second important consideration is the appropriateness of a technical device's switches, means of indicating, modes of output and so forth. Musselwhite and St. Louis (1982) offer a structure for examining communication devices in these terms. Once the level of technology appropriate to the communication needs of the student has been established, the instructor can determine the individual's requirements in the above areas.

1. Input Switches

The variety of commercially available input switches is growing every year. Appendix 9 lists current sources for commercially distributed input switches. In some instances, custom-made switches will be needed. Such cases call for rehabilitation engineering and therapy personnel to select, design and construct the switches.

2. Means of Indicating

There are three means of indicating the symbol: (1) direct selection, (2) scanning and (3) encoding.

> *Direct selection* **refers to "any technique or aid where the user directly indicates the desired message elements. Only one nontime dependent pointing motion is required to indicate each message element."**[3]

Blissymbol stamp displays accessed by direct pointing and electro-mechanical pointers are included in this category.

> *Scanning* refers to "any technique or aid where the message elements (or groups of message elements) are presented to the individual sequentially. When the desired message element is presented, the user indicates it by signalling with a prearranged signal or switch. (Some scanning techniques also allow the user to control the order in which the items are presented — as in indirect scanning techniques)."[4]

Examples of Blissymbol scanning devices are the Prentke-Romich and Zygo scanning boards to which Blissymbols have been applied.

> *Encoding* refers to "any technique or aid in which the desired message elements are indicated by a nontime dependent pattern or a series of input signals. (With an aid, any number of switches may be used. The code may involve activating the switches sequentially or simultaneously.)"[5]

Technical aids employing encoding techniques include those which utilize a system of levels to increase the number of options available, as well as those in which an actual code is used. Blissymbol overlays can be applied to the Handivoice 110 and the VOIS. This voice output device uses colour coding to access different levels. The Autocom, programmed to print Blissymbols, used eight levels of symbols and also used encoding.

An alternative means of encoding consists of using a paging system that stores information on "pages" accessed via an index. This technique formed the basis for indicating information on the Blissymbol Terminal, a dedicated aid prototype produced by Norpac Inc. This technique formed the basis for indicating information on the Blissymbol Terminal.[6]

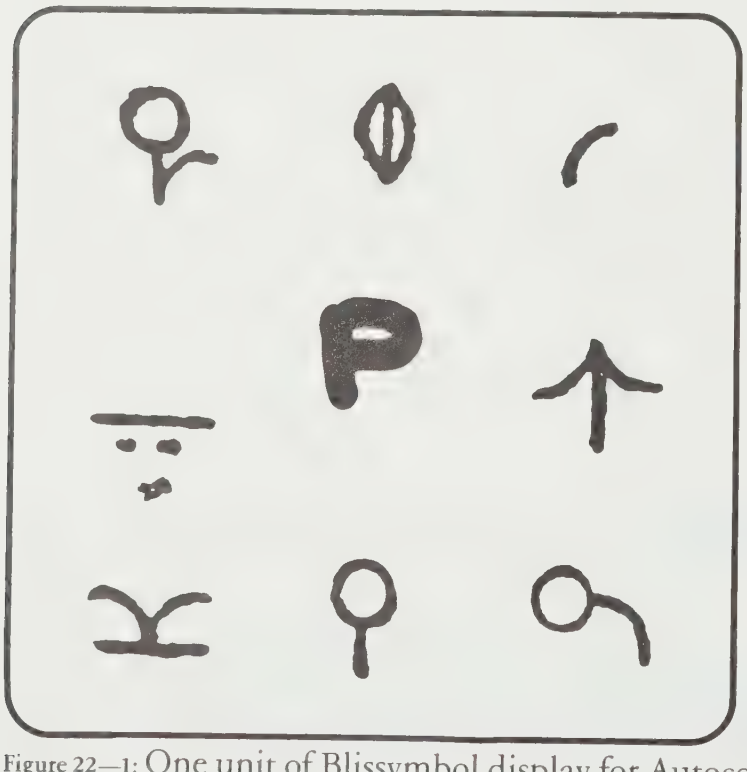


Figure 22—1: One unit of Blissymbol display for Autocom (105 units).

Symbols relating to the plant category are arranged on eight levels and are associated with letter "P" for example, level 1 is "plant," level 2 is "leaf" etc.

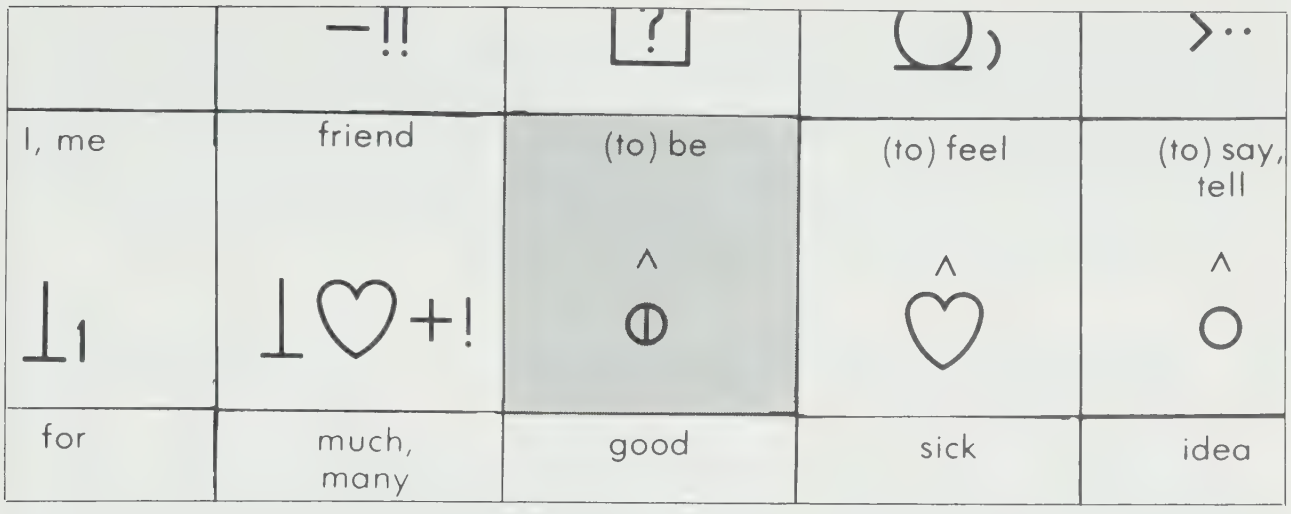


Figure 22—2: Index page Blissymbol Terminal.

Selection being made indicates "to be" page is wanted next.

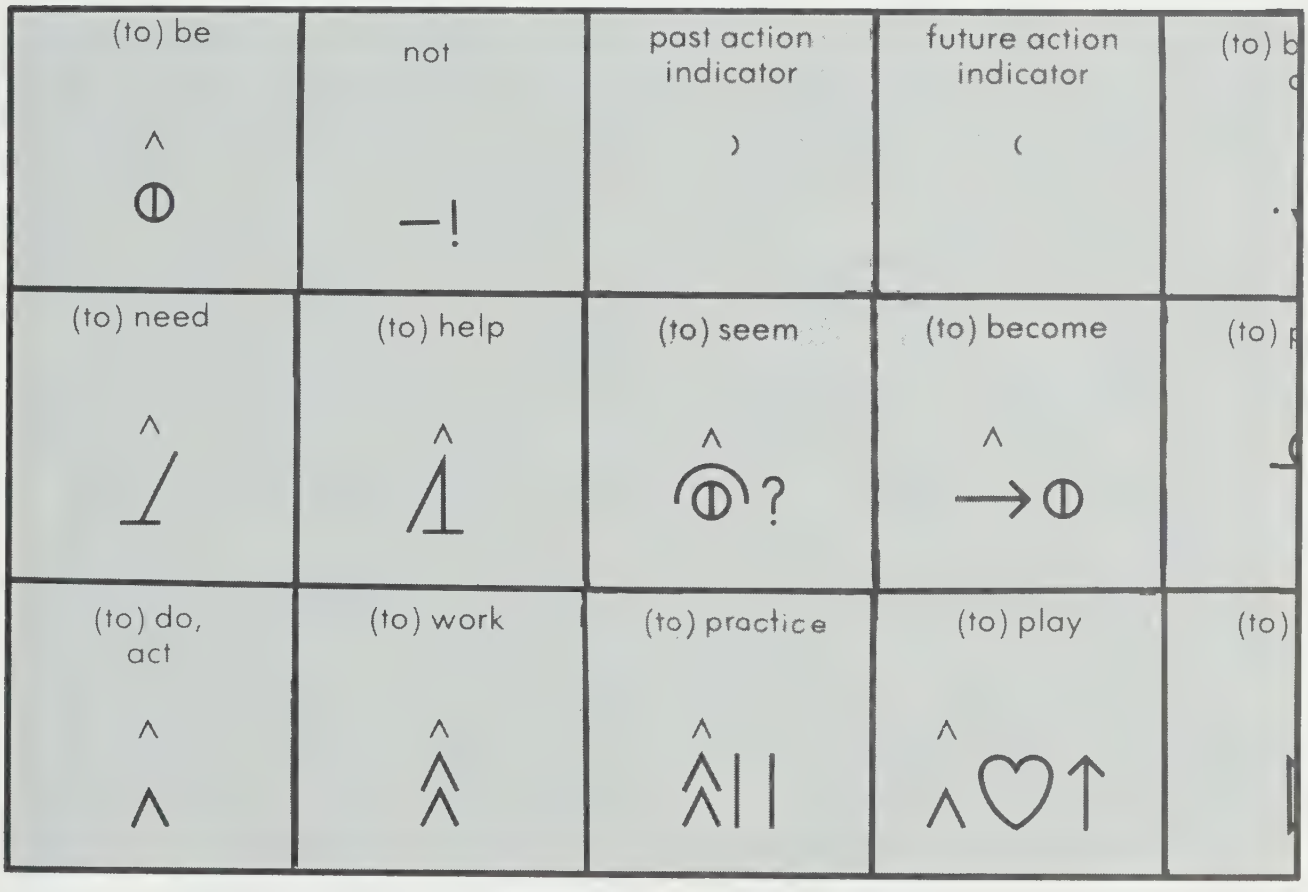


Figure 22—3: "to be" page from which the desired verbs can be selected.

3. Modes of Output

Modes of output can be visual, auditory or both. The output can be indicated by

- a finger or mechanical pointer pointing to a symbol fixed on a display;
- a light-emitting diode (LED) which remains lit or flashing beside a symbol;
- the symbol being backlit;
- the symbol being printed on tape or a page;

- the symbol appearing on a cathode ray tube (CRT) screen;
- synthetic speech saying the word which accompanies the symbol (as with Handivoice); or
- programmed synthetic speech saying well-formed phrases and sentences transformed into English from a symbol string.[7]

C. Technology in Perspective

It is hoped that this short overview of the technological possibilities open to Blissymbol users will stimulate instructors to explore current devices available to users who show potential to benefit from such aids. In opting for technological devices to aid their students, instructors should always keep the following points in mind.

1. Blissymbols allow children access and control of technical devices before they are able to read traditional orthography. In other words, symbols permit early use of communication devices, without requiring children to be fluent readers before they utilize beneficial technology.
2. Any device is only one part of the individual's augmentative communication system and should complement the individual's other communication techniques.
3. Any device is valuable only if it is used and accepted.
4. Any device obtained for an individual should be considered in terms of length of use. For instance, an expensive device purchased for a Blissymbol user who shows potential to progress to traditional orthography should be capable of displaying and providing output in letters and words as well as Blissymbols.

Recommended additional information is contained in Parnes and Lee (1982); McNaughton et al (1982); McNaughton (1983); Goldenberg (1979); Rushakoft (1981); Silverman (1980); and Vanderheiden (1981).

The personal computer offers Blissymbol users many exciting possibilities.[8] Employing software that utilizes Blissymbols enables the Blissymbol user to communicate more effectively and to take part in new activities. Moreover, thanks to the Blissymbol skill-training provided by the personal computer, students have experiences that prepare them for the future use of traditional orthography. The Blissymbol software currently available is listed in each BCI catalogue.

At the time of writing, the Apple personal computer is the only computer for which functional Blissymbol programs have been developed. The application of Blissymbols to other computers will be an exciting development to observe.

D. Blisscii

In fulfilling its mandate to facilitate world-wide Blissymbol communication between nonspeaking persons, the Blissymbolics Communication Institute has co-

ordinated the development and dissemination of *Blisscii* — the Blissymbol Standard Code for Information Interchange. Adhering to Blisscii when developing Blissymbol communication devices will make it possible for users of different devices to exchange messages.

E. The Future

The future can only be imagined. Blissymbol users and instructors can be assured, however, that the Blissymbolics Communication Institute will do its utmost to continue its support and advisory role in promoting the inclusion of Blissymbolics as a graphic medium within future technical devices.

In the meantime, the Blissymbolics Communication Institute continues to explore technologically oriented vocational training programs for nonspeaking people. In addition to developing communication capabilities and educating, BCI believes this technological dimension will broaden the avocational and vocational opportunities of nonspeaking individuals. Blissymbol users have every right to expect that their capabilities will continue to grow and that they will participate in society as fully as their abilities allow.

> **If (computer) access can be assured, the functional disabilities currently experienced by these individuals should decrease markedly as our society moves more and more into the electronic information age. If we fail to ensure access to our computer and information-processing systems for disabled individuals, our progress into the electronic information age will instead only present new barriers.[9]**

A tremendous challenge faces nonspeaking people, in that they must make use of every opportunity provided. Those responsible for instructional programs must stay informed about the rapidly changing knowledge and technology affecting this area. At the same time, the community must accept and include nonspeaking people as they interact and communicate through augmentative communication systems.

NOTES

1. Kates and McNaughton (1975).
2. Levy and Waksvik (1981); Giddings et al (1979); Kelso and Silverman (1977); Colquhoun, McNaughton and Izzard (1983).
3. Vanderheiden (1978).
4. *Ibid.*
5. *Ibid.*
6. Levy and Waksvik (1981).
7. Carlson, Ganstrom and Hunnicutt (1982).
8. McNaughton (1981); Wertz (1982); Lee (1980); Vanderheiden (1983).
9. Vanderheiden (1982).

Appendix 1 Information Sources

Graphic Communication

I Word Boards and Picture Boards

McDonald, Eugene T. and Adeline R. Schultz.
"Communication Boards for Cerebral Palsied Children."
Journal of Speech and Hearing Disorders, Vol. 38
(February, 1973), pp. 73-88.

Vicker, Beverly, "Non-Oral Communication System Project, 1964-1973."
Iowa University Hospital School, Iowa; University of Iowa, 1974.

II Blissymbolics

Blissymbolics Communication Institute
350 Rumsey Road
Toronto, Ontario
Canada M4G 1R8

III World Signs

David Orcutt,
Perry Siding,
Winlaw, British Columbia,
Canada V0G 2Y0

IV Pre-Reading Systems

Rebus
Woodcock, R.W. and C.R. Clark. *Peabody Rebus Reading Program.*
Minnesota: American Guidance Service Inc., 1969.

Available from: American Guidance Service Inc.
Publishers Building,
Circle Pines, Minnesota 55014
U.S.A.

Bridge Reading System
Publication Sales / OISE Press,
The Ontario Institute For Studies in Education,
252 Bloor Street West,
Toronto, Ontario
Canada M5S 1V6

V Picture Sets

Oakland Picture Dictionary
Communication Enhancement Center,
Oakland Schools,
2100 Pontiac Lake Road,
Pontiac, Michigan 48054,
U.S.A.

Pic
George Reed Foundation for the Handicapped,
Box 3400,
Regina, Saskatchewan,
Canada S4P 3W1

Picsyms
Baggeboda Press,
1128 Rhode Island St.,
Lawrence, KS66044
U.S.A.

Sounds and Symbols
Brereton, L.G., L. Burnett and M. Ivimey. *Sounds and Symbols Stage 1.* 1978. Spastic Centre of New South Wales, Mosman, New South Wales, Australia.

Picture Communication Symbols (PCS)
Mayer-Johnson Co.,
964 Estellee,
Salona Beach, CA 9207
U.S.A.

Picture Core Vocabulary
Don Johnston Developmental Equipment
981 Winnetka Terrace
Lake Zurich, IL 60047
U.S.A.

Pictures, Please: A Language Supplement
Communication Skills Builder, Inc.,
3130 North Dodge Blvd.,
P.O. Box 42050,
Tucson, AZ 85733
U.S.A.

Talking Pictures
321 South Third Street,
P.O. Box 04513,
Milwaukee, WI 53204
U.S.A.

Plastic Three-Dimensional Symbols

I Nonslip

Carrier, J.K. Jr. and T. Peak. *Nonslip: Non Speech Language Initiation Program*. Kansas: Lawrence H. and H. Enterprises, 1975.

Sign Systems

I Ameslan, American Sign Language

Fant, Lou. *Sign Language*. Northridge, California: Joyce Media Inc., 1977.

O'Rourke, 1. *A Basic Course in Manual Communication.* Silver Spring, Maryland: National Association of the Deaf, 1973.

Riekehof, L. *Talk to the Deaf*. Springfield, MO.: Gospel Publishing House, 1963.

Stokoe, W., D. Casterline and C. Croneberg. *Dictionary of American Sign Language*. Washington, D. C.: Gallaudet College, 1965.

II British Sign Language

The Royal National Institute for the Deaf,
105 Gower Street,
London, England WC1E 6AH

III British Signs Supporting English

Mrs. Brenda Sutcliffe,
The Royal Institute for the Deaf,
105 Gower Street,
London, England WC1E 6AH

IV Cued Speech

Mrs. June P. Dixon,
The National Centre for Cued Speech for the Deaf,
London House,
68 Upper Richmond Road,
Putney, London,
England SW15 2RP

V Fingerspelling

Guillory, La Vera M. *Expressive and Receptive Fingerspelling for Hearing Adults*. Baton Rouge, Louisiana: Claitor's Publishing Division, 1978.

VI Makaton Vocabulary

Mrs. Margaret Walker,
Makaton Vocabulary Development Project,
85 Pierrefondes Avenue,
Farnborough, Hants,
England.

VII Manual English

Washington State School for the Deaf. *An Introduction to Manual English*. The Washington State School for the Deaf, 1972. Vancouver, WA. U.S.A.

VIII Paget-Gorman Sign System

Mrs. Pauline Phillips,
The Field Officer,
32 Banstead Road,
Caterham, Surrey,
England.

IX Seeing Essential English

Anthony, David. *The Seeing Essential English Manual*. Greely, Colorado: The University of Northern Colorado Bookstore, 1974.

X Signed English

Bornstein, Harry, Lilian B. Hamilton and Barbara M. Kannapell. *Signed English Dictionary for Pre-School and Elementary Levels*. Washington: Gallaudet College Press, 1967.

XI Signing Exact English

Gustason, G., D. Pfetzing, and E. Zawolkow. *Signing Exact English*. Rossmoor, California: Modern Signs Press, 1972.

Gestural Codes

I Amer-Ind

Skelly, Madge. *Amer-Ind Gestural Code Based on Universal American Hand Talk*. New York: Elsevier North Holland, Inc., 1979.

Syllables

I Par Le Si Lab

Cheryl Goodenough-Trepagnier,
Tufts-New England Medical Center,
Box 1014, 171 Harrison Avenue,
Boston, Massachusetts 02111,
U.S.A.

II Speec

Cheryl Goodenough-Trepagnier and Penny Prather,
Tufts-New England Medical Center,
Box 1014, 171 Harrison Avenue,
Boston, Massachusetts 02111,
U.S.A.

Technology

I Trace Center

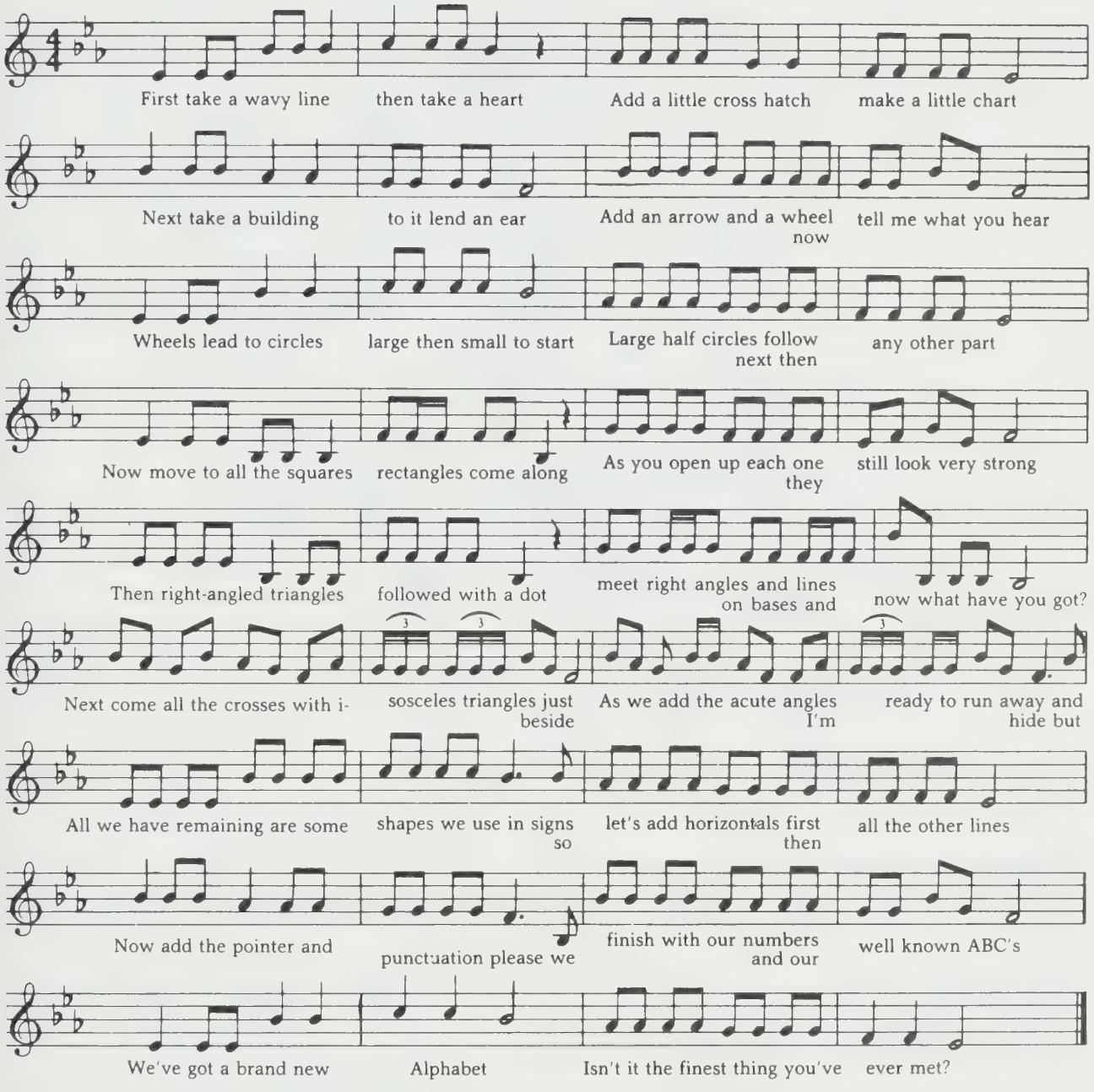
314 Waisman Center,
University of Wisconsin,
Madison, WI 53706
U.S.A.

II International Commission on Technical Aids

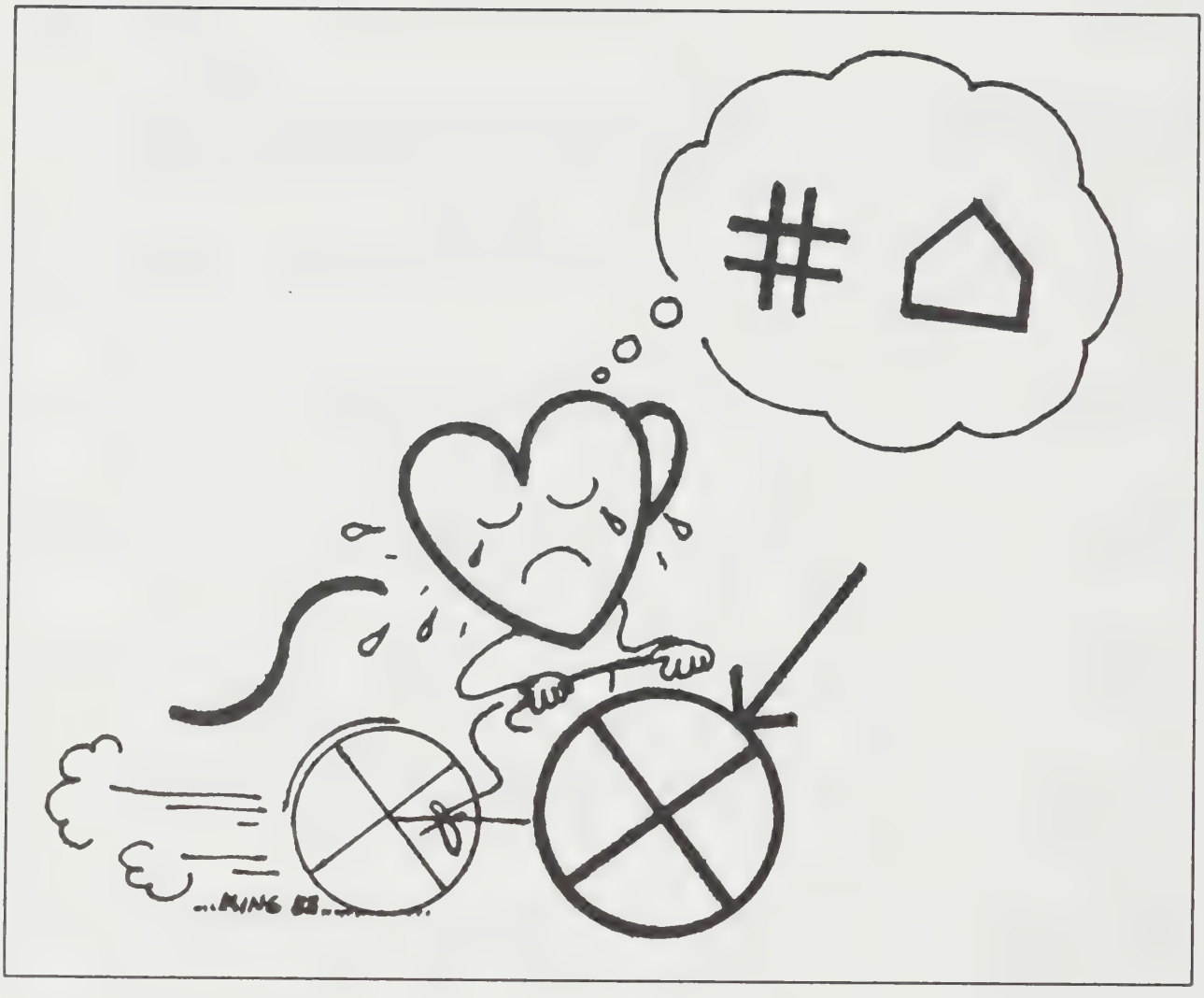
Housing and Transportation,
I.C.T.A. Information Centre,
FACK
S-161 25 Bromma 1,
Sweden

Appendix 2 The Blissymbol Alphabet Song

Words and Music by
SHIRLEY McNAUGHTON



Appendix 3 Alphabet Stories



Visiting Grandma

~ ***Water*** came

♡ from a little ***heart's*** eyes

because he couldn't remember the ***number*** 11

⌂ of his grandmother's ***house***

ʔ until his ***ears*** heard

↑ an ***arrow*** go into his

⊗ bicycle ***tire*** sss sss. 'I know now,' he said.



Mother Bakes Some Cakes

○ One day Mom baked a **big round** cake

o and a **little round** cupcake.

When she opened the oven

) **half the big round** cake was gone

and so was **half the little** round cupcake

□ so she baked some **squares**

▯ and a **long pan** of date loaf.

When she opened the oven

⌐ **half the squares** were gone

and so was **half the long pan** of date loaf

△ so she baked a **fat** piece of **pie.**

· I'll **stop** now she said.

^ But **part** of the **pie** was gone too.



Writing in the Sky

person	to **write**
with many many **teeth**	with a **pointer**
raised his **hand**	his **ABC's** and **one, two, three's.**
to the **sky**	

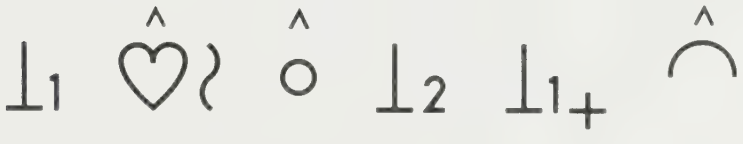
Appendix 4 Phrases to Aid Interaction

The following Blissymbol Interaction Phrases appear in the Introduction to the "207 Blissymbol Core Vocabulary" stamp book (BCI, 1984). They are presented here in different versions to allow the instructor to select the one most appropriate for each student. For the beginning Blissymbol user, the single Blissymbol representation is usually the most suitable.

Expressing Communicative Intent

"I want to tell you something."

"I want to tell you something."



"I want to tell"

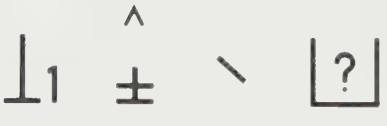


"tell"



"I have a question."

"I have a question."



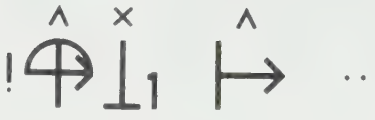
"question"



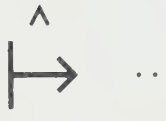
Repair Strategies

"Let's start again."

"Let's start again"

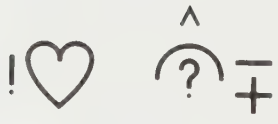


"start again"

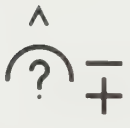


"Please guess."

"Please guess"

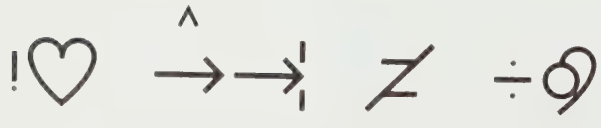


"guess"



"Please try another word."

"Please try another word"



"try another"

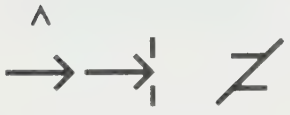


"Please try (a) different meaning (for entire sentence)."

"Please try (a) different meaning."
(for entire sentence)

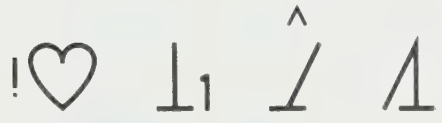


"try (a) different"



"Please I need help."

"Please I need help."

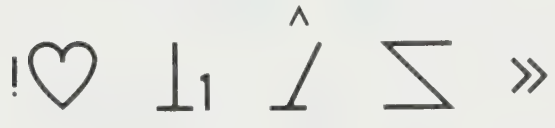


"help"



"Please I need a symbol for . . ."

"Please I need (a) symbol for"



"I need (a) symbol"



"symbol"



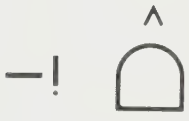
Listener Feedback

"I don't know."

"I don't know."



"don't know"

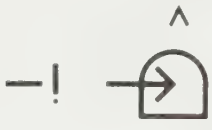


"I don't understand."

"I don't understand."



"don't understand"



"That's interesting!"

"That's interesting!"

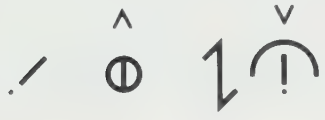


"interesting!"

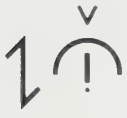


"That's boring."

"That's boring."



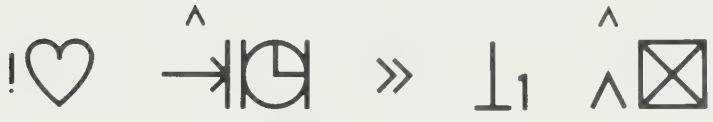
"boring"



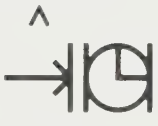
Conversational Control

"Please wait until I'm finished."

"Please wait until I'm finished."

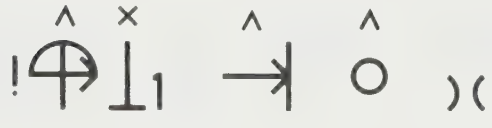


"wait"

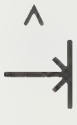


"Let's stop talking now."

"Let's stop talking now."

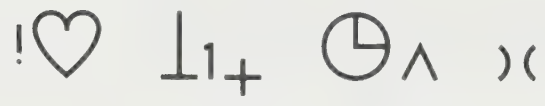


"stop"

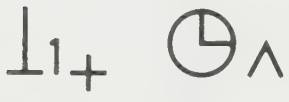


"Please may I have a turn now."

"Please may I have a turn now."



"may I have a turn"



"It's your turn now."

"It's your turn now."



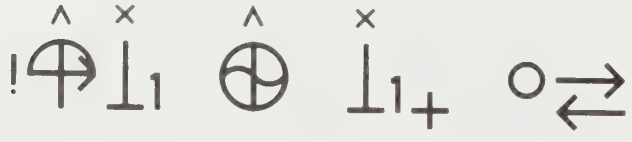
"It's your turn"



Topic Maintenance / Initiation

"Let's change the subject."

"Let's change the subject."



"change"



"Please don't change the subject."

"Please don't change the subject."



"don't change"



Appendix 5 Factors Affecting Limited Achievement

Report from the *Handbook of Blissymbolics*, 1978*

From the December 1975 interviews and questionnaires, the following reasons were given as factors affecting limited achievement:

(a) Lack of interest in communicating.
(b) Inability to understand process of communicating through an alternative medium.
(c) Not ready developmentally — poorly assessed.
(d) Communication with speech as effective as communication with symbols: due to physical limitations child could not gain access to large enough number of symbols.
(e) Speech improved to the extent that symbols were no longer needed.
(f) Lack of family support and co-operation.
(g) Severe behaviour and emotional problems.
(h) Mental functioning level too low.
(i) Extensive physical problems.
(j) Functioning above the readiness level.
(k) The only child in the setting.
(l) The appearance of dyslexic symptoms.
(m) Deteriorating vision.
(n) A deaf child learning reading, typing, math and total communication: the child was overloaded by too many systems being taught simultaneously.

In order to supplement the information from the instructors as to the inappropriateness of symbols for some children, the case studies of those twenty-two symbol users having regressed SYMSKILL[1] scores were reviewed in order to identify common and recurrent factors associated with the regressed SYMSKILL scores.[2] Not all children in the study described by these variables regressed in SYMSKILL; nevertheless, these variables described those symbol users who did regress. The following is a summary of the analysis of the common factors:

TABLE 1	
Common Factors in SYMSKILL Regression	
Description	Number
Symbols used as a complement to speech and / or with mobile child	5
Change in instructor (recorder) and / or residence	6
Requires electronic equipment and / or seating	6
No regular instructional program in chronic care setting	3
Extremely poor ability to attend	1
Highest level of visual materials child relates to is concrete objects (1974–75)	1
Total	22

Along with Table 1, one or more of the following was reported as well:

TABLE 2	
Additional Factors in SYMSKILL Regression	
Description	Number
Bilingual (second language not translated on symbol board)	3
Emotional difficulties — depression	4
Observed I.Q. moderately retarded	3
Visual problems: (a) acuity (c) focusing (b) perceptual (d) limited visual field	5
Institutional residence	8
Infrequent use of symbols at home due to: (a) lack of acceptance (b) speech better understood than symbols (c) child refuses to use symbols	7

In looking at Table 1, a distinction can be made between those factors related to the child's abilities and those over which others have control.

CHILD RELATED:	Number
Factor	
Complement and / or mobile	5
Poor ability to attend	1
Highest level visual materials	1
Total	7
DEPENDENT ON OTHERS:	
Factor	
Change in instructor and / or setting	6
Equipment and / or seating	6
Irregular program	3
Total	15

Of the 22 children who had regressed SYMSKILL scores, over twice as many were described by factors dependent on others, compared with those described by factors relating to the child.

This discussion as to the suitability of symbol use is with specific reference to the physically handicapped child with communication difficulties.

During the course of the study, populations other than the physically handicapped, were identified for whom symbols could possibly help with their communication difficulties. These included: retarded (Vanderheiden, 1975); multiply-handicapped, autistic, aphasic, adult stroke patients (Hughes, 1976), people with auditory perception difficulties, stutterers (Singleton, 1976); those with delayed language development, deaf (Goddard, 1977). For some of these populations exploratory work is being conducted as to the feasibility of symbol use; however, to date there is little documentation available regarding these programs. Individualized assessment procedures need to be developed to ascertain the suitability of symbols for these different populations. Many of the factors outlined in the assessment for the physically handicapped lacking functional speech might be considered; however, the emphasis on specific factors could be different. As well, there are likely additional factors to consider, specific to each particular population. This is an area of future research and development.

NOTES

1. SYMSKILL: skill in using the capabilities of Blissymbolics.
2. A change of 0 to +6 points in SYMSKILL score from December 1974 to December 1975.

*SOURCE: Silverman, H. et al. *Handbook of Blissymbolics.* Toronto, Ont.; Blissymbolics Communication Institute, 1978, Sec. 2, Evaluation Study p. 71. Reprinted by permission of the authors.

Appendix 6 Effect of Blissymbolics on Speech and Language Development

Report from the *Handbook of Blissymbolics*, 1978*

TABLE 1

Prognosis for the Development of Functional Speech

Description	December 1974 No. of Children	December 1974 % of Total	December 1975 No. of Children	December 1975 % of Total
Not applicable	20	13%	13	10%
Poor	112	71	88	70
Limited	20	13	22	17
Good	5	3	3	2
Total	157		126	

During the course of a one-year period, the data shows that among those people using symbols there is relatively no change in the prognosis for the development of functional speech. These statistics are based on the opinions of speech pathologists and symbol instructors in related fields. Although the total number of children being reported on is slightly lower in December 1975 (126) than the number in December 1974 (157), the largest percentage of the population is ranked as having a poor prognosis for the development of functional speech. In both time periods approximately 70 per cent of the population falls under this category.

These statistics deal specifically with a predicted prognosis for the development of speech as an effective means of communication. This does not pertain to the general level of intelligibility of single words and short phrases. More specific information may be gleaned from the questions dealing with the highest level of

communication obtained and the question of symbols as a substitute vs a complement to speech.

Table 2, which deals with the change in the level of functional speech, shows that a portion of the population did show an improvement in this area.

TABLE 2

Change in Level of Functional Speech

Description	December 1974 No. of Children	December 1974 % of Total	December 1975 No. of Children	December 1975 % of Total
Deteriorated over 2 years	5	3%	2	2%
Remained same over 2 years	116	76	76	69
Improved over 2 years	32	21	32	29
Total	153		110	

In those five cases where the level of functional speech was found to deteriorate, further examination of these cases revealed that in all the individuals reported, the deterioration could be attributed to a general physical condition. The diagnosis of such children was recorded as progressive central nervous system disorders. In such cases, each individual's general level of physical functioning was also found to have deteriorated. This degeneration in functional speech was not found to be directly related to the child's use of symbols in any way but to a general deteriorating physical condition.

The majority of reported cases remained at approximately the same level of efficiency — approximately 70 per cent of the population. It is interesting to note that there were thirty-two cases in which speech efficacy was seen to improve over a two year period. The thirty-two cases of reported improvement prior to the initial recording in December 1974 continued to show improvement in December 1975. While the use of symbols cannot be directly related in this instance to any specific area of improvement, in the same way, their use cannot be said to hamper or lessen oral development either. It has been speculated many times, that children using symbols have the tension and pressure removed from oral communication, and as a result are more relaxed orally and able to speak more successfully. Where oral communication is no longer the central focus of attention, spontaneous change seems to occur with increased clarity of speech.

TABLE 3

Highest Level of Verbal Communication

Description	December 1974 No. of Children	December 1974 % of Total	December 1975 No. of Children	December 1975 % of Total
Not stated	4	3%	2	2%
No sound for communication	18	11	5	4
Vocalize	68	43	41	36
Yes / No (verbal)	27	17	22	19
Single words intelligible	18	11	20	18
Two words intelligible	12	8	10	9
More than two words — phrases	10	6	13	11
Total	157		113	

This table illustrates a finer breakdown of communication levels. The greatest percentage of the population appears to fall under the category of vocalizations which were defined as the highest level of verbal communication used as an approximation to a word. A general trend appears to be emerging in an upward direction favouring an increase in the intelligibility of speech. There are proportionately higher percentages of the population reported under "yes / no", "single intelligible words", "2-word combinations" and "more than 2-word phrases". Direct comparisons cannot be drawn because of the differences in recorded cases; however, a definite trend for increased efficiency appears to be developing.

TABLE 4

Substitute / Complement

Description	December 1974 No. of Children	December 1974 % of Total
Symbols introduced as substitute	114	74%
Symbols introduced as complement	31	20
Symbols introduced as substitute, used as complement	10	6
Symbols introduced as complement, used as substitute	0	0
Total	155	

Another trend appears to be emerging when symbols are considered as a substitute rather than a complement to speech. Once again, no direct relationships may be drawn, because of the differences in the number of children recorded. The relative percentages of the total population recorded shows no change in the status of the symbol use. When symbols were introduced as a substitute for speech, the trend demonstrates that symbols are continuing to be used in the same capacity over the one-year recording period. Similarly, in those cases where symbols were introduced as a complement to oral speech, their use as a complement remained static. There were no recorded situations where symbols were introduced as a complement and used as a substitute.

TABLE 5

Speech Assessment Scores

	December 1974	
Description	**No. of Children**	**% of Total**
Not stated / never assessed	17	11%
Within last year	103	66
Between 1 and 2 years	18	11
Over 2 and up to 5 years	14	9
Over 5 and up to 10 years	4	3
Over 10 years	1	1
Total	157	

The findings for the December 1975 recording period are incomplete, because this information was recorded every three months throughout the one-year study period. In many cases the most recent speech assessment did not fall within the final three month recording period. More specific information under this topic was provided through the sub-population as a representative sample of the total population. It should be noted that 66 per cent of the population were accessed within the year prior to the study's commencement in December 1974, while only 11 per cent of the whole population had never received a speech and language assessment. It was reported during all three interviews that speech and language assessments were being incorporated into a routine battery of assessment tools to measure a child's growth in all areas of development while communicating with symbols. Speech pathologists were concerning themselves with the charting of changes in language comprehension and oral muscular control needed for functional speech.

Upon close examination of the following table showing the prevalence of individual speech therapy sessions, one can notice another trend emerging.

TABLE 6

Occurrence of Speech Therapy

Description	December 1974 No. of Children	December 1974 % of Total	December 1975 No. of Children	December 1975 % of Total
No speech therapy	115	73%	95	81%
Once a week	9	6	4	3
Twice a week	20	13	6	5
Three times a week	10	6	6	5
Four to five times a week	3	2	6	5
Total	157		117	

It would appear that the vast majority of the population using symbols do not require or warrant individual speech therapy for better oral techniques control and articulation therapy. Cases for feeding therapy were not included in these statistics. However, from the remaining number of cases, the amount of time spent in therapy seems to be increasing. This is not a surprising result, as the table outlining the upward trend in functional speech shows a gradual increase in the quality and efficacy of those children attempting to use more oral speech. With a very gentle increase in oral skills, it would be feasible to see a gradual increase in the frequency of speech therapy sessions also.

TABLE 7

Assessed Language Comprehension Level

Description	December 1974 No. of Children	December 1974 % of Total	December 1975 No. of Children	December 1975 % of Total
Grossly below age level	56	44%	33	52%
1–2 years below age level	42	33	20	31
At age level	19	15	11	17
Above age level	9	7	—	
Total	126		64	

The table above shows the population rankings or levels as a whole. Further analysis and breakdown on the basis of I.Q. and Age revealed that the I.Q. variable was significant. The higher the I.Q., the better the language comprehension score. A similar effect for the Age variable was not found. Age did not have a significant relationship to the level of language comprehension achieved.

This significance of the I.Q. level is borne out in the recordings of the observed language comprehension level. In almost all cases, instructors tended to rate their children as appearing to understand auditory language at a higher level than test scores actually indicated.

TABLE 8

Observed Language Comprehension Level

Description	December 1974 No. of Children	December 1974 % of Total	December 1975 No. of Children	December 1975 % of Total
Grossly below age level	44	44%	44	35%
1–2 years below age level	32	32	49	39
At age level	16	16	28	22
Above age level	8	8	4	3
Total	100		125	

A larger percentage of children were rated by their instructors as operating at a level of understanding at their appropriate age levels or one to two years below, while actual test scores showed the children to be operating at levels far below their chronological age levels. Unfortunately, the language level categories were too gross to capture any significant fluctuations in age level over a year recording period. More definite age levels between "one-two years below" and "grossly below" may have indicated a more precise trend in language comprehension skills.

TABLE 9

Hearing Diagnosis

Description	December 1974 No. of Children	December 1974 % of Total	December 1975 No. of Children	December 1975 % of Total
Not stated	2	2%		
Severe hearing loss	4	4		
Mild hearing loss	7	7	4	14
Normal	81	86	25	86
Total	94		29	

Although a very large amount of data is missing for December 1975, the majority of the population in this study had hearing activity levels reported within normal limits for the development of speech and language. The number of cases where hearing activity was considered to be severely impaired would warrant further investigation on a case study level. There are no significant data at the present time with which to assess the relative success of an alternative communication system (based, for example, on symbols) which is largely dependent on the auditory explanation.

*SOURCE: Silverman, H. et al. *Handbook of Blissymbolics.* Toronto, Ont.: Blissymbolics Communication Institute, 1978, Sec. 2, Evaluation Study p. 80. Reprinted by permission of the authors.

Appendix 7 Reasons for Student Discontinuation

Report from the *Handbook of Blissymbolics*, 1978*

It is expected that in any research study of this nature some of the recordings will be discontinued. Of the 157 students in the original population, 27 were unable to remain in the research study. Formal notification (i.e., a written statement) of withdrawal from the study was received for 24 of the 27 discontinued students. Although reasons for withdrawal varied, the following categories are the major reasons for discontinuation along with the number of participants involved.

TABLE 1

Reasons for Student Discontinuation

Category	Population No.
(a) A change of physical placement, e.g., move to new community, change of school, medical evaluation in other state, etc.	7
(b) Lack of funding, appropriate support staff, appropriate children, etc.	7
(c) Rejection of symbols either through active refusal, disinterest, or improvement of other functions, e.g., speech.	4
(d) While continuing symbol program, participant inappropriate for research record keeping.	4
(e) Deceased	2

SOURCE: Silverman, H. et al. *Handbook of Blissymbolics*. Toronto, Ont.: Blissymbolics Communication Institute, 1978, Sec. 2, Evaluation Study p. 199. Reprinted by permission of the authors.

Appendix 8 Response to Common Misconceptions Regarding Blissymbolics as a Communication Medium for Nonspeaking Physically Handicapped Children, 1975

Statement One

"Why not teach the child to read instead?" If a child is bright enough to learn symbols, it would be better to devote attention to teaching him or her words which everyone else uses and thus spare the child the time and effort involved in learning two different systems.

Response One

This argument is based on the following premises:

1. words and symbols are organized in the same way;
2. words and symbols require the same learning abilities;
3. communication facility utilizing each system can be acquired with an equal amount of effort and time; and
4. words and symbols fulfil the same function.

However:

1. *Written words* are composed of visual elements (letters and groups of letters) which are related to *sound. Blissymbols* are composed of visual elements which are related to *meaning*—sometimes directly through pictorial representation, sometimes indirectly through representing an idea related to the meaning and sometimes arbitrarily.

2. When the young child first learns words, he or she must remember an abstract visual configuration. Any clues relating this configuration to other parts of the system are based on sound-shape relationships. When the young child first learns Blissymbols, he or she must remember a pictorial representation which refers, by its outline, directly to the object it portrays.
3. Communication facility utilizing the word system is dependent upon skill in spelling — for which training and practice are required. Facility utilizing the Blissymbol system is dependent upon the ability to select the meaning elements (essential characteristics) required to transmit meaning, for which the abilities to classify and describe are required.
4. Both systems do indeed share the common function of providing a vehicle for communication; however, the degree of communication comprehensiveness of each system that can be acquired by the young child and the additional functions served by each system are different and should be recognized as such.

 (a) Words prepare the child for reading and typing (the physically handicapped child's potential written output medium). Words also provide the child with a communication medium which can gradually expand as he or she masters a growing vocabulary.

 (b) Blissymbols equip the child with a complete communication system (accessible to the bright child within a four to fifteen month period). Blissymbols also provide the child with a medium which facilitates creative thinking, inductive processing and concept clarification. Utilization of the medium involves a conceptual framework which gives the child another perspective in viewing and relating to his or her world. Blissymbols provide experience in the processing of visual information and thus contribute to learning to read. Incidental experience with words is provided through the child's constant access to the words which appear with each symbol on his or her display.

To summarize, words provide early limited communication which gradually expands; they prepare for reading and typing. Blissymbols provide earlier comprehensive communication and contribute to creativity and cognitive development; they prepare for reading through experience with the process but not directly with the content of the written English system.

Statement Two

"Words can do as much as symbols do." If a child has 100 spaces which he or she can clearly indicate, he or she will be able to communicate as fully with 100 words in the spaces as with 100 symbols occupying the spaces.

Response Two

This statement fails to recognize the communication potential arising from the structure of the Blissymbol System. Each symbol, whether it be simple or compound, represents a concept that can encompass a range of meanings and be

translated by many words. For example, by utilizing information from the situational context or by responding to additional symbol clues, the symbol for *building* can be interpreted as house, home, structure, hotel, garage, shack, palace, office, tent, etc.

Secondly, each symbol element can be combined and recombined with other elements to form new concepts.

One hundred symbols can lead to an infinite number of words — as many as the child's creative ability will allow. Only through the ability to spell could the word system provide the same communication potential. It can be argued that a broad meaning can also be taken from individual words and that symbols are not necessary. This can certainly be done by those skilled in communicating, but it involves mis-using a system which is based upon precision and accuracy of word meaning. One feels that the child is using a rudimentary form of the word system, for example, pidgin English; whereas with symbols, the child is creatively using a device which is an integral part of the system. The child is indicating a mastery of the symbol system, which gains him or her recognition, rather than utilizing an inferior form of the word system, which tends to minimize his or her capabilities as perceived by others.

Statement Three

"Symbols emphasize that the child is different and present a negative image to others."

Response Three

Our experience has been just the opposite. When open-minded newcomers meet symbol-using children for the first time, they are intrigued by the uniqueness of the children's communication mode. They are impressed with the children's ability to relate to others and to communicate unanticipated information. As they become aware of the children's ability to create new symbols and the manner in which the symbol output is integrated with gesture, early alphabet skills, and vocalization, most people become highly motivated to interact with the children and to learn enough about the symbols to communicate at a level which utilizes the many strategies inherent in the structure of the system.

Statement Four

"Symbols restrict the number of persons with whom the symbol user can communicate, for one must know the symbol system before one can understand the user's output."

Response Four

Not true! You do not have to learn the symbol system in order to communicate with a symbol user. A word appears with every symbol on the user's display. Those

individuals who do not have the time or the desire to learn the symbols can communicate with all symbol users by reading the words. This means basic communication is possible with everyone.

Statement Five

"Blissymbols are best suited to serve as a communication medium for the mentally retarded child. The bright child should learn words."
Or conversely,
"Blissymbols are too difficult for the mentally retarded; only the child with average or above average intellectual ability should be introduced to the symbols."

Response Five

There is a need for exploration of symbol use by children at differing intellectual levels. The child's intellectual ability will determine the use he or she makes of the symbols. The child with limited mental ability will require a teaching approach suited to his or her needs. This child's communication will be limited to basic needs and immediate situations. The brighter child can become involved with the organization and strategies of the system and can become proficient at communicating on various levels, dependent upon the symbol expertise of the person with whom he or she is communicating. Inherent in the Blissymbol system is a complex, comprehensive, creative communication potential (the details of which are outlined in C.K. Bliss's text *Semantography,* (1965)) that can serve the symbol user even in adulthood, should he or she wish to continue an involvement with the system.

Statement Six

"Blissymbols are only useful as a bridge to reading."

Response Six

Blissymbols do provide an excellent preparation for learning to read (see Response One). They are, however, components of an independent communication medium and deserve recognition in this capacity. The symbol system, Blissymbolics, contains an organization and structure which makes it a valuable communication medium with potential application to a wide range of children and adults with communication difficulties.

Appendix 9 Commercially Available Input Switches

Basic Telecommunications Corporation
4414 East Harmony Road
Fort Collins, Colorado
U.S.A. 80525
(303) 226-4688 (Rehab. Products)

Computers for the Physically Handicapped
7602 Talbert Ave.
Unit 4
Huntington Beach, California
U.S.A. 92647
(714) 848-1122

Contemporary Artistic Tech.
Station L
P.O. Box 58430
Vancouver, B.C.
Canada V6P 6K2
(604) 324-8119

Dufco
901 Iva Court
Cambria, California
U.S.A. 93428
(805) 927-4392

Hammacher Schlemmer
147 East 57th Street
New York, New York
U.S.A. 10022
(800) 228-2028

KY Enterprises
3039 East Second Street
Long Beach, California
U.S.A. 90803
(213)433-5244

The Hugh MacMillan Medical Centre (formerly Ontario Crippled Children's Centre)
Rehabilitation Engineering Department
350 Rumsey Rd.
Toronto, Ontario
Canada M4G 1R8
(416) 425-6220

Possum, Inc. International Hospital Products
82 Birch Ave.
Little Silver, New Jersey
U.S.A. 07739
(201) 842-1246

Prentke Romich Company
8769 Twp. Road 513
Shreve, Ohio
U.S.A. 44676
(216) 567-2906

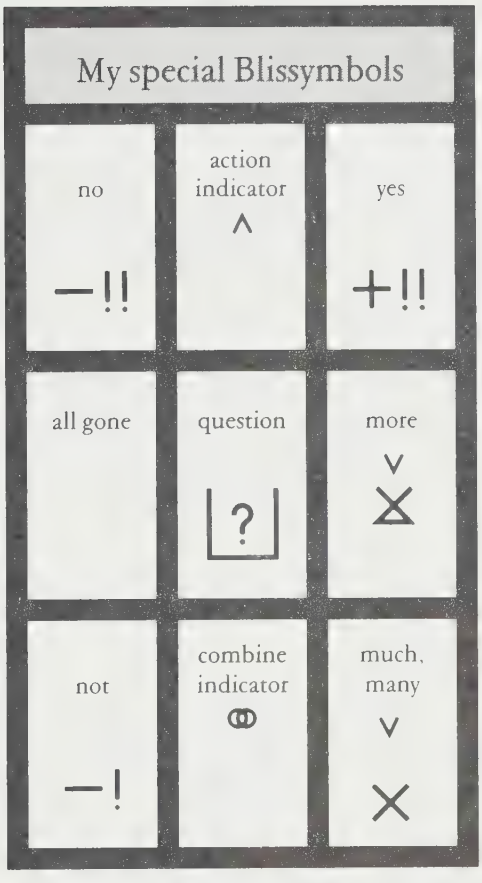
R / M Systems Inc.
22903 Fern Ave.
Torrance, California
U.S.A. 90505
(213) 534-1880

Technical Aids and Systems for the Handicapped Inc. (TASH)
2075 Bayview Ave.
Toronto, Ontario
Canada M4N 3M5
(416) 486-3569

Zygo Industries Inc.
P.O. Box 1008
Portland, Oregon
U.S.A. 97207
(503) 297-1724

Appendix 10 Examples of To Help Me Communicate Blocks

My Special Blissymbols		
Blissymbol	Blissymbol Part	Many / Much
Combine Indicator	Opposite Meaning	Belongs to, of (possessive)
Not	Question	Part Of
Similar	Similar Sound	Command
Plural Indicator	Alphabet	

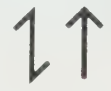


To Help Me Communicate

My name is John. I can hear and understand you. I point to my Blissymbols to talk. Read the word with my symbol to understand my message. If I use a Special Blissymbol, this is what I mean:

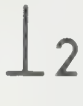
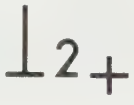
opposite meaning — I want the opposite meaning of the next symbol.



e.g. opposite up I want down. 

belongs to, of (possessive) — I want the possessive meaning of the previous symbol.



e.g.  and  is  yours

part of — I only want a part of the idea



e.g.  part of a car

I might want engine or wheel etc.
You ask questions to find out.

similar — I want a word that means the same or is like the idea.



e.g. like happy I may mean glad. 

combine indicator — The next symbols form one idea. Wait for the whole message.



e.g. protection for head = hat 

abc — I use the first letter of words to add meaning.



e.g. elephant

To help me communicate:
I ask questions as statements by pointing to question 
alphabet  to show what kind of animal, person, etc.
opposite meaning  means opposite of what I point to
plural indicator × means more than one.
(to) work  means talking about my workshop — important to me.
time  I can show time. I am 17 years old. I like people and boys!

Appendix 11 Blissymbol—Spence Symbol Test

In this set you will be seeing two sets of symbol representations, along with the English translation of them. One symbol set will be the *Spence Symbols* and the other will be the *Blissymbols*.

The Spence Symbols have been designed by Murray Spence to provide teachers of early reading programs with the experience of relating to a new medium and attempting to derive meaning from it. Each symbol represents a letter of the English alphabet; the symbols are sequenced to form words on the basis of the sound(s) each symbol represents. The relationship between each symbol and sound is as consistent as English letter-sound relationships.

The Blissymbols are a visual meaning-based communication system.

Blissymbols

When you are ready to begin study the Blissymbols—word relationship for *one minute only*.

NOTE: Look for shape-meaning correspondence.

1. man 

2. woman 

3. table 

4. chair 

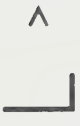
5. truck 

6. bird 

7. bed 

8. box 

9. standing 

10. lying 

11. sitting 

12. tree 

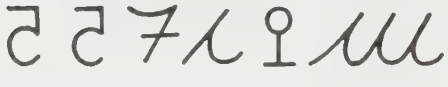
When one minute is up, turn the page.

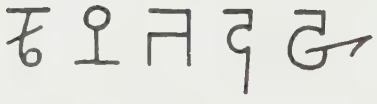
Spence Symbols

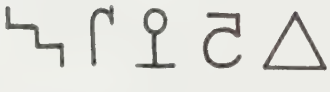
When you are ready to continue, study the Spence Symbol—word relationship for *one minute only.*

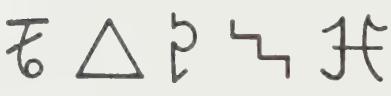
NOTE: Look for sound-shape correspondence.

13. man 

14. woman 

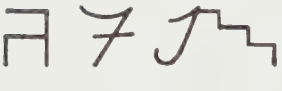
15. table 

16. chair 

17. truck 

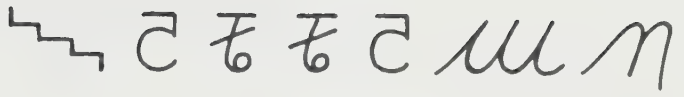
18. bird 

19. bed 

20. box 

21. standing 

22. lying 

23. sitting 

24. tree 

When one minute is up, take a ten minute break of unrelated activity.

When you are ready to begin again, turn to the Test Page. Then allowing yourself *one minute only*, list on the worksheet provided as many words corresponding to the given symbols as you can.

NOTE: Do the easier ones first.

Test Page

1. 

2. 

3. 

4. 

5. 

6. 

7. 

8. 

9. 

10. 

11. 

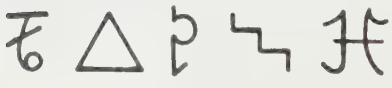
12. 

13. 

14. 

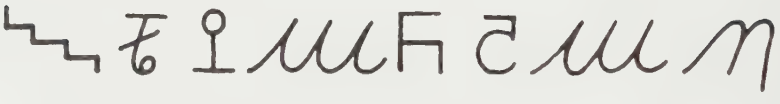
15. 

16. 

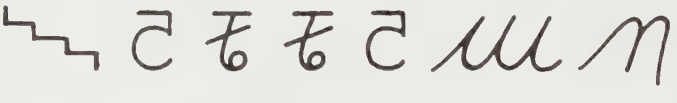
17. 

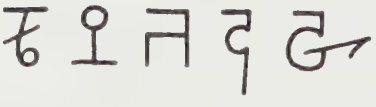
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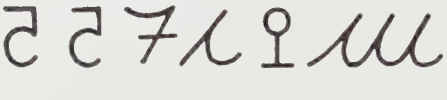
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Test Page Worksheet

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Now that you have completed the test, compare your performance on the Blissymbols with your performance on the Spence Symbols.

Try this test on someone who is not familiar with either symbol system and compare these results with your own.

Answers to the Blissymbol—Spence Symbol Test

1. sitting
2. bird
3. man
4. lying
5. bed
6. standing
7. box
8. tree
9. truck
10. chair
11. woman
12. table
13. lying
14. tree
15. bird
16. man
17. truck
18. chair
19. box
20. standing
21. bed
22. sitting
23. table
24. woman

Glossary of Terms

accessing In Blissymbolics Elementary Training, accessing includes those factors relating to the means by which the Blissymbol user utilizes the system of Blissymbolics. Accessing includes positioning, manner of pointing, technical aids, techniques used to select or transmit the intended symbol and the method used to display the symbols.

anarthria Absence of articulation arising from neuro-muscular conditions affecting muscle tone and the action of the muscles used in articulation. Reflex behaviour appropriate for swallowing, sucking and chewing is also usually affected. Vocalization may be present.

aphasia Absence of recognition and use of verbal expression due to impairment of the dominant cerebral hemisphere subserving the special intellectual functions concerned with the use of language.

apraxia Inability to perform the movements required to reproduce sounds accurately (in isolation or combination) when hearing and perception are normal, and the movements appropriate for swallowing and sucking are performed normally.

assessment The appraisal of behaviour and attitudes to determine the existence of a problem, the nature of a problem, or changes of a problem.

ASHA American Speech-Language-Hearing Association.

augmentative and alternative communication systems Refer to systems / devices used to facilitate effective communication for persons who lack functional speech. These include Blissymbolics, word boards, gestural systems and electronic / mechanical communication devices etc.

back-channel signalling Back-channels are signals which show attention or interest in the speaker's conversation. They are short verbal and physical signals which indicate that the listener is attending to the message and is interested in the communication activity in which he or she is involved.

cerebral palsy The generic title of a condition resulting from damage to the brain occurring in earliest childhood. This damage disturbs the normal co-ordination of the muscles and makes it difficult or impossible to maintain normal postures and perform normal movements and skills. Those suffering from cerebral palsy are divided into the following three main groups: (1) spastic, (2) athetoid and (3) ataxic.

1. *spastic*: The muscles become stiff, as their tension is too high. This is the direct result of the damage to the brain. As the individual either cannot move at all or only with great effort, he or she is more or less fixed in certain abnormal postures.
2. *athetoid*: There are many varieties of this condition. All types in this group have in common an unstable type of muscle tension which makes it impossible for the individual to keep still. When the individual is at rest and comfortable, the tension is often too low and he or she will then have great difficulty in starting to move. If on the other hand, the individual becomes excited or tries to do something that is difficult for him or her, great muscle stiffness may result. This muscle tension instability interferes with any attempted movement.
3. *ataxic*: Wobbly and having no balance.

cognition The process of knowing; includes sensation, perception, memory, conceptualization, mental operations, thinking etc.

direct selection Any technique (or aid) in which the desired choice is directly indicated by the user. In direct selection aids there is a key or sensor for each possible choice or vocabulary element.

dysarthria A less severe form of neuro-muscular articulatory disorder than anarthria; includes slurred, weak, laboured, explosive and other forms of distorted articulation, and also unco-ordinated phonation, respiration and articulation.

dysphasia Incomplete language function. Aphasia and dysphasia may be acquired or developmental; word-finding defects, paraphasia, perservation and

difficulty with short abstract words are common to all types of dysphasia.

dyspraxia Varying degrees of failure to perform the movements required to reproduce speech sounds accurately.

encoding Any technique or aid in which the desired choice is indicated by a pattern or code or input signals, where the pattern or code must be memorized or referred to on a chart. When an aid is used, any number of switches may be utilized (for example, one, two, seven, etc.). The code may involve activating the switch(es) sequentially or simultaneously.

English model Model for Blissymbolics in which the symbols are sequenced in a relationship parallel to spoken English.

idiosyncratic behaviour Behaviour specific to an individual.

intensifier A term applied to such modifiers as *much, so, too, very,* which add emphasis to the words they modify.

interaction Mutual or reciprocal action.

interface The means by which a person controls a technical aid, for example, a joy stick.

lexical Of, or relating to words, word formatives or the vocabulary or a language as distinguished from its grammar and construction.

logograph A letter, character, symbol or sign used to represent an entire word.

modifier That which describes or limits the meaning of a word (symbol) or group of words (symbols).

mnemonics Technique used to assist memory.

nonlinguistic Not formally governed by verbal rules; used to describe communication behaviours that contribute to a message, for example, smiling, head nodding, posture, gestures etc.

orthography A method of representing a language by written or printed symbols.

phonics The sound components of a word.

pictographic symbol A symbol that looks like the object it represents.

positioning The manner in which a person is seated; could include the description of the chair, insert, angle of position, means of support etc.

rebuses When rebuses are used, the meaning of a word is indicated by a "thing" such as a picture or geometric form rather than the spelled form of the word. In a linguistic sense, rebuses are symbols which represent the sound of entire words or parts of words. A rebus can be pictorial or it can be completely abstract.

referent In Blissymbolics the term "referent" denotes the component of a compound symbol which is used to establish a relationship with an associated component. The meaning of the compound symbol is derived from the relation between the referent and the associated component.

scanning Any technique (or aid) in which the selections are offered to the user by a person or display, and where the user makes a selection by responding to the person or display. Depending upon the aid, the user may respond by simply signalling when he or she sees the correct choice presented, or by actively directing an indicator (for example, a light or an arrow) toward the desired choice.

syntax Ordering of words or symbols in a sentence.

telegraphic Used to describe communication that is brief and succinct. The only symbols used are those which are required for the transmission of essential meaning.

utterance A statement made by an individual.

Grammar Terminology

adjective Describes or limits the meaning of a noun or pronoun.

adverb Describes or limits the meaning of a verb, adjective or another adverb.

articles The definite article is 'the'. The indefinite articles are 'a' and 'an'. They indicate that a noun follows.

auxiliary verb A 'helping verb' used to make a form of another verb. The common auxiliaries are be, have, will, may, can, might, must and do.

conjunction A word used to join words, phrases, or clauses. Conjunctions show the relation between the sentence elements that they connect.

grammar The science of treating the classes of words, their inflections, and their syntactical relations and functions.

idiomatic The language peculiar to an individual, a group, a class or a district.

infinitive The verbal form preceded by 'to'.

noun A word used to name a person, place or thing.
Collective noun names a group by using a singular form.
Concrete noun names something that can be perceived by the senses.
Abstract noun names an idea or quality.

preposition A word used to relate a noun or pronoun to some other word in the sentence.

pronoun A word used in place of a noun.

relative pronouns A word used in place of a noun and referring to an antecedent in the same sentence. Examples of relative pronouns are who, which, that.

subordinate conjunctions Subordinating conjunctions (because, if, since, when, where) join subordinate clauses with main clauses.

tense A grammatical property indicating the time of the action expressed by a verb.

Present tense expresses a present or habitual action.
Past tense expresses an action that was completed in the past.
Future tense expresses an action yet to come.

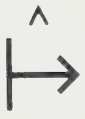
verb A word or phrase used to assert an action or state of being.

verbal A word derived from a verb.

voice The property of a verb that shows whether the subject acts (active voice) or is acted upon (passive voice).

Glossary of Blissymbols in Chapter Headings

Chapter 1: Introduction to Blissymbolics



beginning



Blissymbolics

Chapter 2: Different Ways of Looking at the System



observing



Blissymbolics

Chapter 3: Factors that Affect Symbol Meaning



Blissymbols



and



meaning

Chapter 4: Features of the System

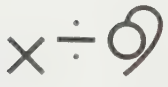


plan



Blissymbolics

Chapter 5: Syntax



sentence



designs

Chapter 6: Blissymbol Shape Alphabet



Blissymbol



shapes

Chapter 7: Drawing Blissymbols



drawing



Blissymbols

Chapter 8: How We Communicate



we



communicate

Chapter 9: Communicating with Blissymbolics



communicating



Blissymbolics

Chapter 10: Blissymbolics with Other Augmentative Communication Systems



Blissymbolics



and



additional



communication

Chapter 11: The Effect of the System on the Sender, the Message, and the Receiver



effect



Blissymbolics

Chapter 12: Styles of the Utterances



types



Blissymbol utterance

Chapter 13: Where to Begin



beginning

Chapter 14: Vocabulary Selection



choosing

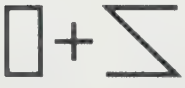


Blissymbols

Chapter 15: Display Organization



planning



symbol display

Chapter 16: Special Blissymbols



special



Blissymbols

Chapter 17: Symbol Instruction for the Individual Symbol User

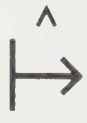


teaching



individual

Chapter 18: Three Sample Introductory Programs



beginning



to teach

Chapter 19: Using Blissymbols to Enrich All Areas of Learning



Blissymbols



adding (to)



learning

Chapter 20: The Effect of Outside Influences on the Blissymbol Program



effect



world

Chapter 21: Special Considerations in Programming for the Severely Physically Disabled



teaching



person, physically handicapped

Chapter 22: Technology and Blissymbolics



machine



Blissymbolics

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